# THE CONSERVATIVE TREATMENT OF TUBERCULOSIS OF JOINTS.*

BY

**W. STEPHEN FENWICK, M.S., F.R.C.S.,**

SENIOR ASSISTANT SURGEON, QUEEN'S HOSPITAL FOR CHILDREN; ASSISTANT SURGEON, CHARING CROSS HOSPITAL.

TEN to fifteen years ago it was customary to treat surgical tuberculosis of joints almost in the same way as cancer. One was advised to operate and remove tissues widely—even amputate—as soon as the diagnosis was made. In recent years, however, this practice has given way more and more to conservative measures, and particularly in surgical tubercle in childhood, of which I wish more especially to speak. There is still no doubt that in adults, where time is important, and the production of a speedy result essential, and where growing epiphyses have not to be reckoned with, the more radical measures are permissible, and even advisable, but in children I am becoming more and more convinced that extensive operative procedures are rarely, if ever, called for, and when necessity arises for them it is due to some gross error in diagnosis or treatment at the outset of the disease.

Let me turn for one moment to the consideration of some of the dangers of the radical operative procedures. First and foremost there is the danger of general tuberculosis and tuberculous meningitis.

At the annual meeting of the British Medical Association in Liverpool, in July last, H. J. Stiles opened a discussion, in the Section of Diseases of Children, on the after-results of major operations for tuberculous diseases of the joints, and gave the results of ten years' operative work. He had performed a total of 205 excisions of the hip, knee, ankle, and elbow joints, and out of this number there were 25 deaths—a percentage of 12. The deaths occurred, roughly speaking, from a few weeks up to one and a half years after operation and were chiefly within the first six months. The great majority of these deaths were from tuberculous meningitis and general tuberculosis. In a recent paper on the results of joint excisions C. A. Morton states that 9 per cent. died within two months of the same causes. Granted that the cases subjected to excision were advanced, I think, nevertheless, that the mortality from general tuberculosis occurring after the operation was very high, and that in all probability, if conservative measures had been persevered with, the death-rate would have been lower.

If we consider for a moment the nature of the operation—that cancellous bone with its large vessels is cut across—it is obvious how the dissemination of the tubercle bacillus is brought about. I think that even after conservative operations upon tuberculous joints there is probably a considerable amount of tuberculous material—bacilli and toxins—forced into the general circulation. If the dose be large, and the resisting power of the patient low at this time, general tuberculosis will result.

It is with the object of minimizing this danger that I strongly urge, before any operative procedure is undertaken on a tuberculous joint, that the resisting power of the blood be raised by a course of tuberculin.

Secondly, there is danger of direct shortening from resection of large portions of bone, often necessary to "get outside" a focus of disease.

Thirdly, there is the grave injury to the growing ends of the bone, with subsequent lack of growth, leading often to most appalling shortening. I have met cases in adults who had been subjected to excision of the knee-joint in childhood, with shortening of 12 inches. H. J. Stiles, whose results appear to compare very favourably in this respect with those obtained by others, in excision of the knee-joint has had 2 with shortening of over 5 in. Also arising from injury to the epiphysis, abnormal growth occurs, producing various curvatures which require cuneiform resection.

Finally, I may mention the immediate danger, always to be feared in these delicate children, of death under anaesthesia or from post-anaesthetic acidosis.

It may be accepted as a general principle that this is a disease from which recovery will take place naturally provided the best conditions, local and general, be furnished. I have met numerous cases, and one stands out particularly in my mind, in which joint pains were present for a considerable period and then disappeared without any form of treatment whatever, only to be followed again later, perhaps after six months or more, by undoubted tuberculosis of the joint. One cannot doubt that if Nature, unaided, were able to bring about a temporary cure, she would, assisted by the various means at our disposal, have produced a more lasting result.

At this hospital, situated as it is in the centre of a very large area densely populated with the poorest of people, we see an enormous number of cases of surgical tubercle, and are afforded an exceptionally good opportunity for studying the disease. To illustrate my remarks, I have chosen examples of tuberculosis of hip, knee, ankle, tarsus, shoulder (rare in children), elbow, and wrist.

Before commencing a description of the actual measures I adopt, let me say one or two words as to the diagnosis of tuberculous cases. A skiagram is taken as a matter of routine, and it is surprising how valuable this method is in the diagnosis of early tubercle, especially in those joints, such as the hip, in which most often the primary focus is in the bone.

When a doubt exists after *x* ray and careful clinical examination I employ either a hypodermic injection of Koch's old tuberculin 0.001 to 0.002 c.cm., or von Pirquet's cutaneous reaction. There are objections I admit to both these tests, but in certain cases they are of value. The old tuberculin injection is almost certain to produce in tuberculous cases a general reaction with a temperature of 101° to 102° F., and a rise in the pulse rate of 20 beats to the minute, a slight feeling of malaise, and some local reaction at the site of injection. I cannot help feeling, however, that it is possible (very remotely I admit) to do harm in certain cases by the test. One so endeavours, in the administration of tuberculin, to avoid a general reaction that I think one should be consistent and not evoke it as a test. However, with 0.001 c.cm. very little damage can be done. Von Pirquet's cutaneous reaction is absolutely safe, but I have so often seen it fail in cases undoubtedly tuberculous that I am bound to say that I do not regard a negative result with very great faith.

Hygienic treatment is of great importance, but is so well known that I will only say that in the Queen's Hospital, drawing as it does its patients from a district where feeding and other conditions are of the worst possible description, I give as a routine a mixture of equal parts of cod-liver oil, malt, and syr. ferri phos. co. ʒi–ii t.d.s., and I take measures to keep the bowels open. These children have to rest continuously for many months, and the absence of exercise produces often marked constipation. As a result of this the appetite falls off and they suffer from alimentary toxaemia in addition to tuberculosis. One eminent surgeon of this city advises the operation of short-circuiting to avoid this condition. Although not advocating any measure so heroic I employ means to achieve a similar result, and the best remedy I know is paraffinum liquidum (*B.P.*). One drachm twice or thrice a day will suffice as a rule, and after a week or so the dose can be reduced.

Rest—absolute and prolonged—is essential, and during the early weeks of treatment the patient is best kept in bed when dealing with the larger joints—hip and knee. A light extension helps to correct deformity, and relieves the starting pains which are often such a distressing feature of tuberculous disease of those joints.

Deformity of the hip and knee should be corrected very gradually, the level above the bed at which the weight acts being adjusted according to the amount of flexion present. The weight used should be as small as possible, for it must be remembered that harmful stretching of ligaments may easily be brought about. Temporary immobility in the case of the hip-joint can be obtained by a long Liston, but it is not advisable to trust to this too long—a double Thomas's splint should be made and fitted by the time that the extension is removed, usually after a month or six weeks.

If possible the child should be taken into the fresh air every day in some form of spinal carriage after the preliminary six weeks in bed. After six months a single



*A post-graduate lecture delivered at the Queen's Hospital on April 9th, 1913.

Thomas's splint may be obtained and the child allowed to get about on crutches with a patten on the sound side.

In the case of the knee-joint, after the preliminary extension and correction of deformity it is best to have a Thomas's knee-splint fitted, or in very poor people plaster-of-Paris may be used to immobilize the articulation. The advantage of Thomas's splint is that it prevents any weight being applied to the joint, at the same time allowing the patient to get about with crutches and a patten.

The ankle-joint should be immobilized in plaster at a right angle, or better, by a wooden back splint with a footpiece and a projection below, which prevents walking. Crutches and a patten can be used to allow the child to get about. In disease of the tarsus similar treatment should be adopted as for the ankle-joint. The shoulder in children—a rare articulation to be attacked by tubercle—is best and most simply immobilized by bandaging to the trunk with a small pad of wool well dusted with boracic powder in the axilla and between the arm and chest wall. The elbow should be fixed at a right angle with a wooden splint or plaster. The wrist is perhaps best kept at rest by an anterior wooden splint reaching as far as the metacarpo-phalangeal joints, so that movements of the fingers can be carried out.

Splints of celluloid or poroplastic have the advantage of lightness, and are of sufficient strength for the treatment of the joints of the upper limb.

After all signs of active disease have disappeared and immobilization has been carried out for a considerable period the great question of return to use arises. It is one of the most difficult matters to decide in the treatment of any joint as to when splints should be left off and movement allowed. Personally I rarely allow movement under six months, and in many cases insist on a year or two years' fixation.

I find the periodical examination by $x$ rays of great value in determining the progress of the healing process in joint tubercle where foci are present in the bone. The reparative changes are accompanied by sclerosis, and this is shown in an $x$-ray picture. Having decided that splints may be left off, I first advise that freedom be given only at night. Then, if, after a fortnight or month, no untoward symptoms arise, I leave off splints during the daytime and allow massage and gentle movements. Thus, cautiously, a return to normal function is obtained.

### *Bier's Treatment.*

In tuberculosis of any joint below the shoulder in the case of the upper limb, and the hip in that of the lower, venous engorgement should be obtained by Bier's elastic bandage.

Bier employs three methods to obtain congestion—the elastic bandage, the cupping glass, and the hot-air chamber; but practically only the first is applicable to almost every case.

Great care should be taken to obtain the right degree of constriction. Excessive pain should not be caused; in fact, many children appear to like the application. The pulse below should never be obliterated, and the blood should always return promptly when expressed from the skin with the finger. The limb below the bandage should be of a bluish-purple colour, never white; in some cases considerable oedema may develop.

I usually begin by applying the bandage for one hour and leaving it off for three; later three hours on and three off, except at night; and later still, in some cases, the bandage may be left on during sleep.

I employ Bier's treatment as a routine method.

### *Iodoform Injections.*

A most useful adjunct to the treatment of joint tubercle is the injection of iodoform emulsion. In this hospital I have not used it for every case, but rather for those that have not improved as rapidly as I wished with immobilization and Bier's treatment.

It is claimed by some that the iodoform by liberating free iodine in the tissues directly attacks and destroys the tubercle bacilli; but I think that it acts chiefly by producing a sclerosis in and around the diseased area. The solution used is 10 parts iodoform in 80 parts glycerine and 20 of water. The iodoform, glycerine and water should be carefully sterilized, and the injection made into the joint cavity, and into the surrounding tissues; 1 to 2 oz. may be used. If any pus exists in the joint cavity it should be aspirated through the cannula before the injection is made. Considerable redness locally and a rise of temperature to 100° and 101° F. may follow the injection; but as a rule everything is normal by the second or third day after. The injections should be repeated three to four times at intervals of a fortnight.

### *Abscesses.*

If abscess develops a needle of large bore connected to a Record syringe should be thrust into the cavity, and the contents sucked out. The syringe should then be detached, leaving the needle *in situ*, and filled with iodoform emulsion (1 to 2 oz.), which is then injected into the abscess cavity.

The needle should always be introduced through a considerable thickness of tissue and in an oblique manner, so as to avoid danger of sinus formation. Many surgeons prefer to make a small incision into the abscess, curette gently away the lining membrane, and after washing out with saline and injecting iodoform to close without drainage. This method I think very liable to lead to sinus formation with its attendant dangers of secondary infection.

### *Operation.*

Some cases of joint tubercle will not yield to these measures, and we have to operate. Here again, however, I am very strongly in favour of the more conservative operation of arthrectomy or erasion as opposed to the radical excision. The advantages of arthrectomy are:

1. No extensive section of bone.
2. No loss of length.
3. No interference with the epiphysial line, and therefore no deficiency or abnormality in growth.

All these grave objections obtain in excision.

The joint surfaces are exposed through a suitable incision, diseased synovial membrane dissected away, and the tuberculous foci in the bony extremities curetted.

It may be argued that foci of disease are occasionally overlooked, and undoubtedly this may be so, but I am doubtful whether even the most careful excision always succeeds in removing all infected material. What probably happens most commonly is, that the surgeon removes the major portion of the disease, and Nature does the rest.

After arthrectomy considerable movement in the joint may be obtained; this in the upper limb is to be aimed at, but in the lower it is probably better to bring about ankylosis at the hip and knee when disease has progressed far enough to warrant operation. This result may be achieved readily by removing a thin scale of cartilage from the opposing joint surfaces.

It is occasionally necessary to excise joints in childhood, but this operation should be reserved for those cases in which there is either complete disorganization or ankylosis in a faulty position.

### *Amputation.*

I am glad to be able to say that up to the present I have never performed amputation for tuberculous disease of a joint in a child. It should never, or very very rarely, be necessary in childhood, because time can be given for prolonged conservative measures.

I would only amputate for joint tubercle if in addition to extensive bone involvement there were also gross infection of soft parts, secondary infection with pyogenic organisms and amyloid disease.

### *Tuberculin.*

I am very firmly convinced of the value of the administration of tuberculin in all cases of surgical tuberculosis, unless the infection with the bacilli is so grave as to cause a highly oscillating temperature or other grave signs.

No case of tuberculosis should be operated upon without a preliminary course of tuberculin, as this will, I am sure, help to guard against those distressing cases of general tuberculosis arising after operation. Tuberculin must not, however, be regarded as more than a useful adjunct. Alone it will not cure. All other means at our disposal should also be employed.

The methods of administering tuberculin are by hypodermic injection and by the mouth. The former is

obviously the more scientific, and the latter has been generally condemned as of no value. Nevertheless, it is a method that I have employed as a routine in the out-patient department, and I can speak of it in the highest possible terms. It has the merit of extreme ease of administration.

I have three bottles made up with normal saline containing in each ounce $\frac{1}{1000}$, $\frac{1}{100}$, and $\frac{1}{10}$ mg. of T.R.; $\frac{1}{2}$ per cent. phenol helps to preserve the solution.

I commence by giving a child ʒj of the weak solution, or $\frac{1}{8000}$ mg., and the next week double the dose provided there has been no rise of temperature. In the out-patient department I rarely increase the dose beyond $\frac{1}{100}$ mg., as supervision is not easy.

I believe strongly in small doses to begin with, gradually increased and continued over a long time.

I have never seen any harm result. As a rule, after one or two doses the appetite and colour are better, and the lesion shows slight improvement.

I have here to-day a case of tuberculosis of the tarsus and metatarsus, which has had nothing in the way of treatment except tuberculin and cod-liver oil mixture. The child has run about on the diseased foot practically the whole time except for the first month of treatment, when, owing to the large swelling on the dorsum of the foot, it could not get its shoe on.

Before proceeding to demonstrate the cases of joint tuberculosis that I have collected here to-day, let me emphasize what I have already said, that surgical tuberculosis of joints in children can be cured and most efficiently cured, by the conservative measures which I have just now rapidly reviewed, and that the more radical methods are rarely required, and do not give such good results.

CASE I.—*T.B. Hip.* G. D., female, aged 8. First seen in April, 1912. Symptoms for three to four weeks. *X* ray shows changes in head and under surface of neck. *Treatment:* Rest in double Thomas six months. Tuberculin by mouth every fourteen days. November, 1912, movements in hip normal. April, 1913, splint off one month. No evidence of disease.

CASE II.—*T.B. Knee.* A. B., female, aged 13. Symptoms started January, 1910. Treated for some months with rest in plaster at convalescent home. November 23rd, 1910, re-admitted. Knee very swollen. Synovial sac distended with pus. *X* ray showed erosion of cartilages and bone of tibial and femoral epiphysis. *Treatment:* Tuberculin by mouth every week until July, 1911. Iodoform injections on five occasions with aspiration of pus. Bier's elastic bandage, one hour on, three off. *Present condition:* Healthy-looking girl. Walking since July, 1912, with apparatus to guard against flexion. Shortening ½ in. Knee ankylosed.

CASE III.—*T.B. Ankle.* F. A., female, aged 2 years 6 months. First seen March 5th, 1913. History five to six weeks. *X* ray, no bony changes. *Treatment:* Splint, Bier's bandage, tuberculin. *Present condition:* General health much improved; some reduction in size of swelling.

CASE IV.—*T.B. Metatarsus* (also subcutaneous nodule on buttock). First seen March, 1912. Large swelling over dorsum of foot. *X* ray shows large focus in first metatarsal and epiphysis of cuneiform metatarsal joint. *Treatment:* Splint one month; tuberculin by mouth every week. Child has run about since first month of treatment. *Present condition:* Swelling disappeared; no pain or symptoms of any kind; walks perfectly. *X* ray shows marked sclerosis around the foci.

CASE V.—*T.B. Hip.* H. P., male, aged 11. Abscess tapped left side, September, 1910; iodoform; double Thomas one year; tuberculin every week. Splint left off September, 1911. *Present condition:* Movements at hip perfect; slight limp; shortening 1 in. *X* ray shows focus in neck sclerosed; some coxa vara.

CASE VI.—*T.B. Elbow.* C. K., aged 8 years 9 months. January, 1912, swollen elbow; all signs disappeared after one month; was quite well through the summer. October, 1912, swelling recurred, gradually increased, pain marked, limitation of movement. January, 1913, *x* ray shows large focus in diaphysis of humerus. *Treatment:* Immobolized in plaster at right angle; tuberculin by mouth; general condition improved; swelling about the same.

CASE VII.—*T.B. Wrist.* P. B., aged 5 years 3 months. December, 1912, large swelling on dorsum; sinus discharging; *x* ray shows no bony change. *Treatment:* Splint from elbow to metacarpal joints; Bier's bandage; tuberculin; iodoform injections on three occasions. *Present condition:* Sinus healed; swelling almost disappeared except on radial side of wrist; movements of fingers good; no pain; general condition improved.

CASE VIII.—*T.B. Shoulder.* M.B., female, aged 3 years. September, 1912, swelling and pain right shoulder; abscess pointing anteriorly; *x* ray showed very extensive disease of head and shaft. *Treatment:* Tuberculin given for two weeks. *Operation:* Incision in front of deltoid; joint opened; sequestra and granulation tissue sharp-spooned; iodoform emulsion introduced; healed per primam; arm fixed to chest by bandage; tuberculin continued. *Present condition:* Wound soundly healed; movements in joint slight; no pain; general condition good.

CASE IX.—*T.B. Knee*, and teno-synovitis middle finger of right hand. E. H., female, aged 3 years. November, 1910, typical tuberculous swelling knee; *x* ray negative. *Treatment:* Thomas's knee splint; crutches and patten; Bier's; tuberculin. *Present condition:* Knee shows no swelling, stiff but some movement which is increasing; walking well; finger practically normal.

# Presidential Addresses

TO THE

# BRANCHES OF THE BRITISH MEDICAL ASSOCIATION.

## METROPOLITAN COUNTIES BRANCH.

## THE PROFESSION, THE PUBLIC, AND THE INSURANCE ACT.

BY R. L. LANGDON-DOWN, M.B., M.R.C.P.

IN entering upon the duties to which you have called me, may I be allowed to give expression to the two feelings which are uppermost in my mind? The first is the sense of the honour you have conferred upon me in placing me in the chair of this Branch, for which I take this the earliest opportunity of thanking you; and the second is the sense of the responsibility that rests upon me. All I can say is that I will do my best to carry on the high traditions of the office, well assured that in this I shall have the help and support of able and willing workers on the Council, as my predecessors have had in the past.

Since the report of the Council was issued death has withdrawn from among us a distinguished member of our profession, who was also a member of this Branch, and for a brief period edited our JOURNAL. Sir Jonathan Hutchinson, by his enthusiasm for medical education and by showing how much could be done to advance science by the method of patient observation, record, and comparison, will always be remembered among the great men we honour as pioneers in medicine. His name and memory therefore claim a place in our thoughts to-day.

### REORGANIZATION.

The report of the Council for the past year shows that the Branch has been ready to take the lead in important matters of Association policy, such as the rearrangement of the boundaries of Divisions, and the proposals it has made for strengthening and perfecting the constitution of the Association, on the initiative of Dr. Biggs, which are now the basis of the proposals before the Representative Meeting; it has also devoted much time and thought to the suggestions of the Central Council dealing with schemes for a public medical service under the auspices of the Association and in regard to improvements of the Insurance Act. The power of organization and the readiness to work enthusiastically shown by the Metropolitan Divisions during the latter part of last year was very remarkable, and reflected great credit on them and their leaders. Such a record cannot fail to give weight to the counsels of this Branch in the Association, and any changes in the constitution which may give greater powers and more duties to the Branches will naturally affect the work and responsibility of the Metropolitan Branch in an especial degree.

The rearrangement of the Division boundaries in which this Branch took a very early part, following the enthusiastic lead of Dr. Sykes and Dr. Barnes, may seem to some to have been a mere piece of mechanical adjustment. I venture to think it is of more significance than that: it implies a new meaning, a fresh principle of policy. Hitherto the criterion in mapping out Divisions had been the convenience of members in attending meetings; now we have taken as the guiding idea the necessity for making our organization march side by side with the organization for local government, and our boundaries tally as far as possible with those of civil administrative areas.

The next step that lies immediately ahead of us is to bring the Local and District Medical Committees into closer touch with the Association. There is the danger that the men on these bodies may become so preoccupied with details of insurance work that they may lose sight of other matters of equal importance to the profession. No such isolated statutory bodies can properly replace the independent and co-ordinated activities of our Association. On the other hand, the local interest and personal activity which has been stimulated by the formation of these bodies should be utilized as far as possible to draw new strength to the Association.

Among our twenty-seven Divisions we now welcome representatives of the whole of Hertfordshire, Middlesex, and London; but we have no desire to annex for the sake of annexing, and if we were asked to part with some of our Divisions in Surrey, as is possible, we should, I feel sure, be guided by what we conceive to be the ultimate interests of the Association as a whole.

### National Health Insurance.

In spite of this, owing to cleavage produced in the profession by the coming into operation of medical benefit under the Insurance Act and the attitude of hostility to that measure adopted by the Representative Meeting in January, there has been throughout the Association a situation most unfavourable to any vigorous action. There is a sense of unreality and ineffectiveness about our proceedings; meetings are less well attended, and Divisions are less interested in the doings of the Association.

Until some solution of our present difficulties and this state of suspense and uncertainty can be found, we cannot go vigorously ahead with the work before us. Our members are looking to us to take an active hand in modelling the regulations under the Act and in administering the Act and the regulations in the best interests of the profession.

We have most important questions in front of us in regard to the perfecting of our own constitution and organization. This will make large demands on our time and energy. How can we concentrate effectively on such work in our present frame of mind?

One of the most pressing problems requiring solution is that of the dependants of insured persons, to which is closely allied the question of the treatment of elementary school children found on inspection to be defective. Much may be done here by prompt and united action to prevent the mischief of underselling and to avoid the mistakes and difficulties that arose in connexion with the National Insurance Act. We ought to be preparing to help our members and others engaged in work under the Act with schemes under which by co-operation and specialization the work can be systematized and carried out under better and more convenient conditions, such as treatment centres, etc.

We have also to consider such questions as the provision of institution treatment, co-ordination of the hospitals with the men for scientific work, the provision of clinical laboratories, special appliances needed in treatment, the whole question of nursing, and many other points.

All these matters the Association is better fitted to deal with than any other body in the profession. And yet, in the uncertainty which exists as to our position and future action, we find ourselves weak and distracted owing to the absence of the necessary driving power, unanimity, and enthusiasm.

That this is a misfortune for the public interest no less than for the profession can hardly be doubted. There is nothing in the relations of the authorities with large bodies of the industrial and commercial world which leads to more difficulties and disagreements than the want of a well-organized, broad-based, independent representative body to speak in the name of the employers on the one hand and the employed on the other. That the Association should again be in a position to speak in the name of a united profession with vigour and decision is, I am convinced, a thing to be desired no less in the interests of the public, so that they may have a well-considered and authoritative statement of our views on any subject, than for the maintenance of the honour and interests of the profession.

I have therefore felt impelled to review the position of the profession in regard to this great change that has come over medical practice during the present year with a view to seeing if it is possible to find a course that shall bring us together again for the objects we all have in view, and in particular the unity and strength of our Association.

### *The Voluntary Club System.*

That legislation of some kind in regard to provision of medical treatment had become necessary is a matter of general agreement. The existing arrangements had failed to bring medical assistance of an adequate kind to large sections of the people, and even where it had, the conditions were profoundly unsatisfactory to the medical profession. Whether the principle of club practice was originated by the doctors or the clubs I do not know, but the profession found it necessary in most industrial areas to adopt this plan if they were to be secure of even a moderate reward for the services they rendered to the people, and not press unduly on their patients' resources.

The essential vices of the voluntary club system were: (1) The fact that the club and not the patient was the employer of the doctor, and (2) that the appointments were practically put up to auction with all the consequent evils of underselling; in short, though admitted to be necessary, it was regarded by the profession as unsatisfactory. The attitude of the public in regard to provision for sickness may be briefly summed up in the following passage from a speech by one of the lay Insurance Commissioners.

> The important question that so often came up nowadays was how far professional work, unless effectively organized, could meet modern needs. These were difficult, but they had to be faced and thought out. All social reform must follow certain stages of progress. In the first place there was the position when there were only a few in the whole population who realized and enjoyed certain benefits as a result of their wealth and position. The next stage came when the many had begun to see what excellent effects followed on the possession of these advantages and arrangements, and then arrangements were made for the advantages to be more widespread through the community and made available for any who desired them. The third stage was when the community, having seen first the good effect on the few, and then the good effect on the many, came to realize that this particular thing, which was the luxury of the few and then the possession of the many, had become so important to the welfare of the whole that no one should be allowed to do without it. The question of health had now reached the third stage, when the community had said it was impossible to allow any one to go without suitable means for the mitigation of sickness. These obligations were in the interest of the community as well as of the individual.

### *The Attitude of the Association to the Insurance Bill.*

The British Medical Association has from the first admitted the necessity for legislation to extend medical assistance to the poorer classes of the community, and the National Insurance Act was accepted in principle by the Representative Meeting as a means of attaining this end.

The main objects of the scheme were:

1. To provide effective medical assistance to the wage earner in every family, together with certain sickness and invalidity benefits.
2. To do this on the compulsory insurance principle, of which the essential feature is a regular small payment during health.

In agreeing to the principle of the Act, it must be taken that we agreed with these objects. Incidentally it may be mentioned that one of the indirect consequences of the payments being collected compulsorily, was to give them technically the status of taxes and public funds.

It hardly concerns us as to the sources from which the money was to be raised, but it seems clear that without direct aid from the national exchequer any improvement in the remuneration of the doctor would be very difficult; on the other hand, if one thing was more certain than another, it was that the State would inevitably insist upon an important voice in controlling the expenditure of such funds, and that all medical men who drew payment from or administered these funds would have to be in some degree public servants.

Assuming, then, as I think I may, the general acceptance of these principles of the Insurance Act by the profession, the next question that had to be settled was as to the form of medical practice to be adopted under the bill.

There were broadly three possible choices:

I.

A continuation of the friendly society system, under which the doctor was a direct servant of the society and the members had to put up with the medical man chosen for them. This was, as I have said, one of the root evils of the old contract practice system; it failed to provide or to foster the relations of confidence and trust between doctor and patient that are so essential to success in treatment, and it led often to perfunctory, ill-paid work, which was all that the doctor could afford to give in the circumstances, and which was all that those who received his treatment came to expect. The other evil of this system was the mutual distrust and jealousy engendered in the profession by constant underselling, and the inadequate level of payment which resulted from such competition, and which as an Association we strove, often in vain, to remedy.

II.

The second possible choice was the organization under the State of a salaried medical service. A scheme founded in part on this bssis was set forth in the admirable address delivered from this chair last year. In abstract logic there is much to recommend such a plan. It would solve many difficulties which still lie ahead of us. It has many keen advocates among advanced politicians, and even in our own ranks one is sensible of a movement in this direction.

Among the extreme supporters of this principle the ideal is the extinction of private practice. Others desire the persistence of private practice side by side with the State service.

The difficulty in this latter case is that the industrial classes could not afford to forego sickness benefit, and it is difficult to see how the State could administer sickness benefit except through its own salaried officers. The result of this would be that private practice would become restricted to the well-to-do classes, unless, indeed, the acceptance of sickness benefit came to be held to carry the stigma of pauperism, when we should be in practically te same position as under the old system.

But so far the idea of a State medical service has received the support of only a small minority both of the profession and the public. It is easy to see why the profession is hostile, for such a change would be far more revolutionary than the Act, and private practice would not merely be changed in character, but restricted to quite narrow limits or destroyed. The unreadiness of the public, as I believe, for such a change is based on a deep-seated, instinctive preference for an intimate and personal rather than for a purely official relationship between patient and doctor.

III.

We come, then, to the third alternative—that is, to maintain as far as possible under the Act the essential features of private practice.

The distinguishing character of private practice is the personal relation; this will on consideration be found to rest in the last resort on the right of the patient to change his doctor and on the right of a doctor to decline a patient. This principle was put in the forefront of our programme with the universal approval of the profession, and was adopted by the Government.

Whatever may have been said to the contrary (and undoubtedly extravagant things were said), free choice of doctor can never imply unlimited freedom of choice; even in ordinary private practice the choice is limited by such circumstances as the means of the patient, the place of his residence, the number of doctors available, etc. But even if there are only two doctors to choose from, the right to change from the one to the other serves to distinguish the relationship from that with a doctor appointed by an official, and in whose selection the patient has practically no voice; and, similarly, the correlative right of the doctor to refuse to treat a patient must be subject to certain slight practical limitations, but these do not destroy its effective value.

Similarly, seeing that the medical man working under the Act must be in some sense a public servant, there must be some conditions and regulations to which the doctor must submit; but with the right secured for both patient and doctor to exercise selection, and with the doctor free to follow his own line of treatment, as is practically assured, we have the nearest possible approach to private practice in its essentials.

One of the consequences arising out of this was the plan, also originally suggested by the Association, that in order that the public might know which doctors were willing to serve under the Act, and to help them in making their choice, a list of the doctors willing to serve should be published. This list we called a panel. It seems to be a practical and simple arrangement. But putting the name on the panel involves the acceptance of certain conditions, and there is a number of men willing to do the work and accept payment from and share in the administration of what have been decided to be public funds, but who are unwilling to subscribe to the conditions, and desire to make their own arrangements entirely free from public control. This, I submit, would be in direct contravention of one of the most firmly established rules of public policy in this country; also, if extensively allowed it would greatly impair the value of the Act from the point of view of collecting information and statistics.

I think it will be clear to those who have followed my argument that any attack on the panel system as such comes up against inexorable and inevitable conditions, and that the only alternative is some form of State service which would be equally or more distasteful to the objectors.

*Compulsory National Insurance.*

Let us consider the position. Pure private practice failed to meet the wants of the people; the old form of club practice stands universally condemned; the reception accorded locally to our carefully considered schemes for a public medical service organized by the profession showed that they were felt to be impracticable, and could not live side by side with a scheme of compulsory national insurance.

What other alternative is there than some form of State service more or less complete and universal? Can it be doubted that at the present time any such scheme would be regarded as more injurious to the profession than the present Act? If this is the only alternative, then let us realize that those who demand changes in the Act which are inconsistent with its fundamental character are in effect leading the way to far more drastic and sweeping changes, however little that may be their intention.

In regard to reasonable requests to make private arrangements within the conditions of the Act and the regulations, no obstacles are now being raised, and permission has been granted for a doctor to limit himself as to the number of patients he will attend, and to indicate the fact on a list. This right, coupled with the right of the doctor to select his patients, will secure for the able and experienced man in better class practice, if he exercises his selection rigidly, the advantages to which his superior ability entitles him. It is probably the case that in the first start of the Act the selection of the doctor was rather a happy-go-lucky affair, and that we are not yet in a position to judge of its results. The elimination of undesirables will begin next year.

It was at first feared that the bad lives would generally be refused, or would be left over for distribution among the doctors, often against their will. Experience seems to be showing that the bad lives had no difficulty in being accepted, and that the great mass of those who have not chosen a doctor and have to be allotted are persons who do not know what it is to be ill. Presumably, too, those doctors who join the service for a limited number of patients only will not be required to take any of the unallotted surplus. It is probable that this surplus will be disposed of by mutual arrangements among the doctors without any great hardship.

Another illustration of unexpected results is the fact that in South Wales the provision by which the insured are allowed to make their own arrangements is being utilized to re-establish some of the worst evils of the discarded system, and this will have to be carefully guarded against.

*The Working of the Scheme.*

But it will be said, and rightly, that the most important thing of all is that the medical service should be adequate and efficient.

What are the facts of the situation to-day? There are in the United Kingdom some 32,600 practitioners, of whom probably 2,000 have retired from practice, and about 5,000 more are in the category of medical officers of health, specialists, school doctors, asylum and Poor Law officers, etc., and so stand outside the ranks of those engaged in general practice, who thus number about 25,600 for the United Kingdom; if 2,200 be deducted for those in Ireland, we find that 23,400 are available for Insurance Act work in Great Britain.

The number of names on the panels is 18,000, which after full allowance for duplication, probably represents at least 15,000 individuals actually doing the work, or nearly two-thirds of the available members of the profession. Again, the members of the Association in Great Britain number 18,200, as compared with 29,800 in the profession as a whole, If the men working the Act are drawn in similar proportions from members and non-members, then of the 15,000 panel doctors 9,160 are members of the Association; that is more than half our members in this country.

I think it may be taken from this that the work is at present in the hands of a fair average sample of the medical profession, and the choice of doctor, though not as large as it might be, must still be ample in most places. In some areas every member of the profession has joined the panel. But it is not only the right men that must be secured, it is necessary if they are to maintain their high standard of work and efficiency that the remuneration and conditions should be such that the work need not be unduly hurried.

As regards the adequacy of the remuneration, it is far too early to come to a conclusion. The incidence of sickness is variable, and it is only right to bear in mind that the sickness experience of the first quarter of the year happened to be exceptionally heavy, and very different results may be shown in other quarters. Allowance must also be made for the fact that the surgery attendances for slight ailments would probably be excessive owing to the novelty of the opportunities enjoyed by the insured. But it is stated that in some cases the number of visits at the patient's home is far below expectation.

In any case it would seem *prima facie* that the 15,000 practitioners who continue to do the work are not altogether discontented with the payment received. We shall know better how results turn out at the end of a year.

As to the conditions of the work, the authorities have shown that they are anxious to reduce the clerical work to the lowest level possible. The relief from dispensing should be a great boon to many men. As far as I can gather in other respects the conditions are not burdensome and work easily as a rule.

We are, unfortunately, reading of complaints as to the inefficiency of the medical service under the Act, and there has been a tendency to welcome these complaints as evidence of the unsatisfactory nature of the conditions, and to use them as proof that the prophecies of evil were coming true. That in the early days of medical benefit, when the sudden and concentrated burden of the clerical work coincided with a period of exceptional sickness, some of the complaints arose from the inability of the doctors to cope with the work I think there can be no doubt, but in recent complaints I have noticed some which point to inefficient work from quite other causes.

First of all it may be said to be common ground that under the old and bad system inefficient work was inevitable. The same men have come into this work and their old habits are likely to persist for a time in some cases. But the machinery provided by the Act and the principle of free choice of doctor will in due course tend to raise the quality of the work now required and to crush out neglect and abuses. In any case before condemning the new system let us remember how bad things were before, and be sure that there is not already a great improvement.

Such defects in the working of the Act are a matter of regret, in the first place because they tend to throw discredit on the profession, also because they are being used by some of the public to prove that the service under the Act is from the nature of the case inadequate and inefficient. The remedy which many who are hostile to the Act desire is by no means an extension of the liberties of the profession under the Act or an increase of the remuneration of its services, but a universal State Medical Service, for which they have long been working.

On the other hand, the doctor, anxious to do his best for the invalid and finding himself often for the first time in a position to prescribe what is frequently most needed by the patient—namely, "money instead of medicine," and rest, which are available in the form of sickness benefit—may not at first have given sufficient thought to his responsibilities in the matter. When one case only is before one the needs of that case may seem trifling in comparison with the seemingly bottomless purse of the Insurance Fund.

But the doctor is placed in a position of trust. He has to administer public moneys for the benefit of his patient and at the same time to safeguard the insured as a whole against unnecessary or improper claims on their funds. It is clear that on the lowest grounds no more deadly injury could be inflicted on the principle of private practice among the insured than a failure to execute this trust without fear or favour; but, more than that, the reputation of the profession for honour and trustworthiness is at stake in this matter, and no words could be too strong to condemn the folly and disgrace of deliberate misconduct in regard to it. The appointment of medical referees is a valuable protection to doctors against unreasonable complaints on the part of the patient if the doctor is firm in resisting imposition.

It is quite possible that inadequate provision has been made to meet the really urgent demands of sickness benefit; if so, it is the duty of the profession to say so, and to make it clear on trustworthy evidence. I have no doubt that the profession, now that it realizes the position, will prove equal to the trust.

### *Income Limit.*

Of all the points for which we contended last year that of the income limit is the only one which we completely failed to secure and in regard to which the Government did not go a long way to meet our wishes. Many men consider that they have suffered heavily by the transition owing to this, and we all regret that this is so. It seems, however, to be the one point on which there still appears to be no hope of relief from any quarter. And yet even in regard to this hardship I hear it said that, provided the remuneration is adequate, the income limit does not much matter in the long run. Whether the remuneration will prove adequate to this remains to be seen. In estimating this it is important always to bear in mind the possibility of error in comparing receipts based on a regular annual payment from a large sleeping *clientèle* with the spasmodic receipts based on actual attendance. It is only necessary to remind you that under a State scheme income limits might be abolished altogether. It seems to me that this is a case where something might still be done by approaching the Government in a cordial spirit to find a plan which should alleviate this hardship. In one minor respect the claims of the profession in regard to income limit have been met in the amending bill now before Parliament.

### *Method of Remuneration.*

It will be in the memory of those who followed the meetings of the profession in 1911 and 1912 how prominently this matter figured in the forefront of our debates, how equally divided the Association was, and how hot the feeling. Since the Act came into force the attitude of the profession seems to have undergone a steady progressive change. In this Branch, I believe, the capitation method of payment has been generally adopted. In the discussion on the proposed public medical service scheme this method was that which secured the adhesion of the Branch Council. I believe it may be said that it has been very generally adopted by the country as a whole. This may be due to force of circumstances rather than to deliberate choice, and to the realization that in any case the fund to be drawn upon would be definitely limited in either case.

It is sometimes argued in favour of the system of payment by attendance that the doctor should not be asked to take the risk, but it is clear that if the amount of the remuneration fund is fixed the doctor must bear a risk in either case. On the one hand he has the risk of exceptional work for the same pay, and on the other the risk of exceptional unemployment with diminished income.

That the fund should be fixed is an essential part of an insurance system. Salaried officials have to bear a similar risk of exceptional work. It is often assumed in discussions of this matter that contract payment is incompatible with private practice; so far is this from being the case that in many of our smaller colonial settlements all the private practice among the white population, even of the best class, is run on the contract system with complete success and general satisfaction. That it inevitably involves scamping and shirking is a proposition which is contradicted by the experience of other walks of life, and I decline to believe it is true in the case of the medical profession.

But from the point of view of mere logic, if the Insurance Act is accepted in principle, as it has been, then, seeing that the fund for the payment of the doctors is limited, the service is essentially a contract, whether the distribution of the fund is to be on the basis of persons on the doctors' lists or attendances given. Any other system restores the very evils from which the old individual system suffered—the risk of bad debts and the unlimited risk to patient coming just when he is least able to bear it, and introduces the element of the money anxiety into the relation between the doctor and his patient, which may hamper the doctor in his work and the patient in his recovery. So bound up is the flat-rate system of fee with the unity of interest of patient and doctor from the preventive side of medical practice that I cannot help thinking that one day it will be extended to better class private practice in proportion to the means of the patient and on the foundation that every family would be compelled to choose a regular medical attendant. It may be looking a long way ahead and sound impossible to-day, but it would carry with it immense advantages to all concerned.

### Concluding Survey.

I have ventured to carry your minds back over the familiar ground of this question from the very beginning, because it is only by viewing things as a whole that we see them in their right proportions and are able to subordinate that which is subsidiary to that which is fundamental and essential, and because it is here that our difficulties still lie.

It is only by standing back, so that one may get, as it were, a bird's-eye view of the situation in its broad outlines, that we can trace the direction in which the different roads are leading, and that we are reminded of the tracts of country we have left behind.

Also we are now able to reconsider the question at a time when we are beginning to test our anticipations and our fears in the light of actual experience, and this is much to be desired at a moment when some further decision must shortly be come to as to the attitude to be adopted by the Association.

May I say how such a survey strikes me? In the first place we are apt to underestimate the great influence we had in moulding the Act to our views in its broad aspect in the early stages, and also the successes we achieved as a result of our representations to the Government last autumn.

The next broad fact which we cannot ignore is that the Act is now in work and that a majority of our own members in this country are working under it and are apparently resolved to continue to work under it. How can we as an Association, in the face of this situation, maintain, as we did before medical benefit began to be administered, that the Act is to be condemned as derogatory and unworkable? Remember it is one thing for individual members or groups of members to continue to hold this view and to act upon it in their individual capacity, should they consider it their duty, by refusing to take service under its conditions, and another and very different thing to persist in condemning by resolution of the Association the action of those who, after experience of the work and in enormous numbers, apparently take a contrary view.

It is for those who continue working the Act to tell us their difficulties and in what respects we can help them to obtain improvements, when we ought to give them every assistance in our power.

It is a matter for those who are still dissatisfied and are standing outside and resisting to consider, on the one hand, whether they can bring the medical service of the Act to a standstill, and if so, whether that would lead to a satisfactory solution, or whether the outcome might not be infinitely more disastrous to private practice than the present position; and on the other hand, if that is not their intention or desire, whether they are likely by their present policy to induce the Government to concede their demands, or whether they would not do better to drop their hostility to the measure and by friendly negotiation and co-operation with the men on the panel seek to make the Act as fair and efficient as possible.

But whatever view they may take on these matters, I suggest that the time has come when the Association should officially dissociate itself from any such hostile action.

The present position is that the Act is on its trial; it is still being improved, and it is too early to pronounce judgement upon it; it is not yet time to curse it nor to bless it altogether.

Let us, then, withdraw our condemnations, which were based mainly on anticipations; pronounce no blessings, but wait and see. If we call a truce now we shall save ourselves from the risk of humiliation and the loss of prestige in the public eye, which would be the result of ineffectual action.

And as regards our own members and the profession generally, we shall gradually heal our dissensions, we shall close our ranks, renew our vitality, and clear the ground for the Association to exert in an effective and whole-hearted manner that influence on public opinion and future developments to which it is entitled by its representative character and its splendid work and achievements in the past.

---

## SOUTHERN BRANCH.

## MEDICINE AND EUGENICS.

By JOHN COWPER, M.B., C.M.Edin.,
Shanklin, Isle of Wight.

For some time past we have constantly had before us a subject closely affecting the relation of our profession to that of the general public. It came from without, having a political origin, and we had to face it, though not a few of us got rather weary of its changing aspects.

This year another subject, of a very different kind and origin, and of vastly greater ultimate significance, has been prominently brought before the notice of the people of this country, though it affects other countries as well as our own. I allude to the first Eugenic Congress, very appropriately held in London, the city in which Sir Francis Galton established his laboratory for the study of heredity as affecting the members of civilized communities.

Just as sanitary and hygienic reform was developed and pushed forward by the medical men so will this newer science rely to a large extent upon the same profession for the establishment in the minds of the community generally the grasping of the fundamental principles underlying it.

I do not assert that medical men alone have been the pioneers in the study of sanitation, hygiene, and heredity, but if you deduct the men who have had a medical education, whether they practised their profession or not, very little indeed would be left. Moreover, before any new studies bearing upon, and affecting, the lives of men and women can become effective the practical bearing has to be brought home to the minds of the people themselves, and in this respect I do not think that the profession to which we belong has had its due share of credit for the sanitary and hygienic reforms which it has been instrumental in bringing about, often not only without thanks or acknowledgement, but in the face of opposition and difficulty.

I am well aware that even amongst experts and medical men many of the questions in heredity are still theoretical, and some highly speculative, in spite of all the work that has been done in recent years. But besides these theoretical and speculative questions, certain well ascertained facts have emerged, as can easily be gathered from the treatises of such writers as Professor Thomson and Dr. Archdall Reid.

Darwin long ago pointed out that the factors determining the modification of organic beings are heredity and environment. The sanitary and hygienic reformer has given his attention to environment, and at the present day it must be admitted that all practical attempts to improve man's condition has been likewise aimed in the same direction. Such great strides have been made in the practice of our art, that we are apt to overlook the fact that all our efforts in the treatment of man's diseases and maldevelopments have been directed to his environment (sanitary and hygienic surroundings, baths, foods, drugs, massage, electricity, and surgery are all environmental).

Now, biologists, from Darwin downwards, have all placed a far higher value upon heredity than upon environment, and that view is even more pronounced in the writings of biologists of the present day. Nurture can do, and has done, much. Nature can do more. The stock-master has realized and acted upon this fact. Certainly, he has made use of environment, but it has been as nothing in the production of our domestic breeds of animals compared with heredity—namely, the selection of favourable variations. The breeders of animals have, of course, unlimited control over their stock; the generations are much shorter, and animals have been selected almost entirely for physical characters. Even the dog has suffered much in this respect.

In the case of man, the modification of environment is comparatively easy; the guiding of heredity is intrinsically difficult and surrounded by conventions. In the case of disease, however, heredity has played an important part. No one can peruse Dr. Reid's book on *Alcoholism* without becoming firmly convinced of that fact, and the same applies to zymotic diseases. Natural selection is here the agent at work. So much has been done to ameliorate man's environment that there is great danger of our attributing too much to its influence.

In certain ways the processes are antagonistic. Up till recent times the human organism has been struggling to attain to a natural immunity to microbic disease, and attempting to maintain itself against exterminating influences by a process of the natural elimination of the most susceptible members. Modifying the environment is beginning at the other end; it is, indeed, a complete reversal of method, and the more we ameliorate the environment the more we render the average member of a community susceptible to any given disease. What we gain at one end we lose at the other. If, however, we can completely control any given disease (such as cholera and typhus), then susceptibility matters nothing so long as we can maintain that condition. Can we hope to gain a complete control over the tubercle bacillus? Recent statistical researches by Professor Karl Pearson seem to show that much of the amelioration which we medical men have been in the habit of attributing to recent methods of dealing with the disease is in reality due to a natural process of elimination, and he supports this view by stating that the most marked fall in the tuberculous death-rate occurred before the introduction of the sanatorium treatment.

This is a point of importance, for the greater the number of persons that are tided over to a marriageable age the smaller will be the average natural resistance to the disease. This is a factor that faces us in other branches, as, for instance, obstetrics. The higher the skill attained in the obstetric art the more difficult will childbirth become. Again, when the child is launched into the world, the manufacturing chemist, the skilled nurse and the doctor are all, rightly enough, combining to make the environment as favourable as possible. To realize this, one has only to compare our present infantile mortality with that of a few decades ago, or to compare the East of Europe with the West in that respect. To prevent Nature (heredity) stepping in and claiming her own, we must be prepared to go on continuously improving the environment of the infant, and the same argument applies to our falling death-rate. Such like factors have been pointed to as portentous evils, leading to race degeneration, but it does not appear to me that the process of attaining a natural immunity (tubercle, etc.) would thereby be prevented. Its attainment would be delayed. I may say here, in parenthesis, that the sanatorium isolation of the poor affected by tuberculosis is an inestimable benefit conferred upon the relatives of the tuberculous, and it appears to me that we ought to develop this system as they have done in America.

It must have struck most of us in inquiring into the hereditary history of patients, how little the majority of people know of the medical history of their ancestors and collateral relatives. Jonathan Hutchinson long ago suggested the advisability of the head of the family tabulating the diseases affecting his family. Unless some system is carried out, we cannot get sufficient data to be of any real value, except in rare cases. The importance of the problems of heredity is beginning to be generally recognized. For instance, is the assumption true that the slums of cities produce the kind of human inhabitant found there, or does the type gravitate there, having been ousted from better places? The need for more data is urgent, and we as a profession ought to press that need home, for without carefully collected statistics on a large scale all sorts of unsound measures devised to ameliorate the social conditions of the population, both in health and disease, are sure to be resorted to.

It would be outside the scope of this paper to enumerate even most of the many theories of heredity. Not to go back farther than to the French naturalist, Lamarck, who wrote in the early part of the nineteenth century, whose theory was that of the "transmission of acquired characters." That all organisms, including man, do make acquirements during their lifetime is an admitted fact. Certain organs are strengthened by use, while others decrease and degenerate from absence of functional activity. Lamarck believed that these acquirements are inherited, and he supposed that after many generations of this process definite results would accrue.

Darwin, writing later, accepted this view, but he had to account for the phenomena of sexual and asexual reproduction, regeneration of lost parts, variability, inheritance of inborn and acquired characters, and reversion to a previous ancestor. He then formulated his theory of pangenesis, which supposed that the various cells of the body throw off "gemmules," which were distributed both in the germ cells and somatic cells of the individual. After this, a current of opinion set in the direction of independence of the germ cells, and that these cells were not made up of samples of the body; that is to say, the germ cells produce germ cells and body cells, but body cells do *not* produce germ cells, but only contain and carry them on.

Professor Weismann was the great exponent of this view, and his theory of the continuity of the germ plasm is known to all. One very important point at once arises from this theory, and that is that acquired characters cannot be transmitted if the theory be correct. Starting from the solid ground of chromosomes, he passes on with theoretical entities to develop a highly complicated and speculative system, until as a scientific doctrine it is in imminent danger of languishing by the very luxuriance of its theoretical growth. Whatever the ultimate fate of his theory, he has done more to stimulate inquiry into the subject than any other living investigator. Most of the younger biologists have accepted Weismann's doctrine of the continuity of the germ plasm and the non-transmission of acquired characters, but this view does not entirely hold the field, as may be gathered from the presidential address of Professor Francis Darwin, the botanist, at the British Association in 1908. That address was devoted to the elaboration of what is usually known as the mnemic theory of heredity. This implies that every living cell, whether constituting a unicellular organism or a unit of a multicellular being, is possessed of a sort of organic memory. In the more highly organized forms of life the body plasm is co-ordinated and guided chiefly by means of a nervous system, and there we know with what facility difficult and complex processes become automatic (that is, what we are in the habit of calling unconscious) through repetition. In the germ plasm the ontogeny is regulated mainly or solely by the cell nuclei, or chromatin (Weismann's germinal substance); and Francis Darwin says, "May we not therefore consider it probable that the nucleus plays in the cell the part of a central nervous system?" Professor Hering had before this maintained "that ontogeny—the building up of the embryo—is actually and literally a habit." That is to say, one may liken each generation to the successive lessons in learning a

game or the playing of a musical instrument, or the details of an unknown road. The playing of a game or the musical instrument is learnt, and the road becomes so familiar, that complicated activities are performed without, as we say, thinking of them. Also there is the possible cumulative action of environment. Unhealthy conditions may exist for several generations before the effect becomes obvious, just as the soaking of water into a stratum of clay underlying sandstone goes on insidiously and unnoticed until the resulting landslip occurs suddenly, and is obvious at once.

Lastly, we may mention the Mendelian theory of heredity. Though historically Mendel published his views in 1866, they received no attention till 1900. Mendel's theory is important, for it is the antithesis of what was generally held, and what one may best call the theory of "blending"—namely, that a fair and dark parent or a short and tall one will have intermediate offspring, and that this will be a more or less continuous and uniform process. Mendel has established that in a large number of instances this is certainly not the case. He found that certain characters which vary are inherited discontinuously, and that there is not blending, but segregation. His now famous experiments were carried out on varieties of the edible pea, which grew in his monastery garden. He observed that the peas varied in certain characters; he noted these individual characters, ignoring the rest, and experimented upon one character at a time.

In both the edible and the sweet pea there is a tall and a dwarf variety. The tallest plants of the dwarf variety are shorter than the shortest individuals of the tall variety. Mendel found that in crossing the short and tall varieties all the progeny were tall—quite as tall as the tall variety. He then self-fertilized these tall hybrids, and they then produced some short and some tall, *but none intermediate*. Here is definite segregation.

Mendel looked upon the tallness and shortness as alternative characters, and as tallness alone appeared in the first cross, he spoke of it as "dominant," and the shortness as "recessive." A dominant character has some factor which is not present in its recessive alternative. By continuing this process the tall and short individuals can be completely segregated, so that they breed true for an indefinite number of generations. This same process has been found to apply to many characters in animals in which it has been tried.

Mendel explains these facts by supposing that the tall plant produces germ cells or "gametes," bearing the character tallness; the short plant the reverse. The hybrid contains both conditions; the cells resulting from the union of these gametes contain a double set of determinants for the various characters, one determinant of each pair being derived from the male and the other from the female. An individual, the production of two gametes and having this double character, is called a "zygote." Further, when the zygote contains two like characters, it is called a homozygote (two talls), when two unlike characters it is called a heterozygote (a tall and a short). The gist of Mendel's theory, then, is the segregation of pairs of characters (called by Professor Bateson allelomorphs) in the production of homozygote and heterozygote offspring, which, when self-fertilized or by others of the like constitution, breed true, whatever their ancestry.

These results are not merely of scientific interest but of practical application, as is shown by the work of Professor Biffen of Cambridge on varieties of wheat. While English wheats produce heavy crops, they are liable to attacks of a fungus known as "rust," and the grain is deficient in gluten, which renders it inferior to the hard foreign varieties for baking purposes. It was held that the highly glutinous hard foreign wheat could not be grown in the English climate, as the hard varieties imported for trial soon deteriorated. Professor Biffen, however, obtained a hard variety which kept its qualities when grown in England, but its yield was too low to be grown for profit, and it was also subject to "rust." Among the many varieties experimented with he found one that was immune to attacks of rust, though in other respects it was practically useless. He further found that these wheats in their characters of immunity to "rust," hardness of grain, and power of production exhibited Mendelian factors on an experimental breeding analysis, with the result that he produced a wheat combining hardness of grain, heavy yield, and complete immunity from "rust," and this wheat has been found to retain these qualities over the series of years it has been grown. Sufficient work has now been done to show that the same results can be obtained in the case of animals also. It is not my intention to add anything to the already interminable discussion on the important question of the "transmission of acquired characters." Much of the discussion has been over terms rather than facts, and some of the authorities are not yet agreed as to what constitutes an acquired character (vide *Nature*, February and March, 1912). This year a new edition of Weismann's book has been published, and in it Mendel's conception of segregation is accepted, and the author endeavours to reconcile his theory of heredity with the recent researches along Mendelian lines. The sexual cells are certainly segregated, but they are not shut up in hermetically sealed compartments until the moment of conjugation; in fact, they are nourished by the same blood and lymph as the rest of the body. The extremely dogmatic statements that are now current are liable to lead to the overlooking of a very important question, which may be of marked racial import. May not poisons, such as alcohol and toxins of various diseases, affect the germ cells previous to conjugation? Physiologists tell us that alcohol and various toxins do lower the vitality of cells. I can see no reason why toxic substances circulating in the blood and lymph should not affect the germ cells, and even produce pathological variations affecting the offspring built up from these cells. My late teacher, Professor Ewart, obtained results from experiments on pigeons suffering from malaria, which seem to indicate that the germ cells are liable to be influenced by fevers and other forms of disease that for the time being diminish the vitality of the parents. Further experiments may show that the germ cells are influenced in different ways by different diseases. In this case the birds infected were "recessive" while they were suffering from the malaria parasite, but were markedly "dominant" when well. In spite of all the material to gather from, there does not appear to be sufficient carefully collected data to decide whether alcoholism in parents produces degeneration in offspring. Possibly the data on this subject would need to be larger and more unequivocal than in others, for it is a curious psychological fact what a tendency there is to unconscious bias when considering the reaction of the body and spirit. The *odium alcoholicum* seems only to be second to the *odium theologicum*. Be that as it may, the environmental school appear to me to have left two points that might with great advantage have been dealt with. The evils of the over-indulgence in alcoholic drinks are admitted on all hands. That being so, the liquors containing the higher percentages are more detrimental, and a graduated duty in favour of the drinks containing the lower percentages would be of value. The other point is, why should not dipsomaniacs, with proper safeguards, be subject to compulsory certification, just as other maniacs are, not only for their own protection, but for that of their relatives?

Possibly none of these theories of heredity contain the whole truth, but nevertheless sufficient well ascertained facts and results have been obtained to compel us to consider our position and attitude towards them. Before sterilization or other drastic methods as already advocated by some enthusiasts can have any chance of application, we must know a great deal more of the hereditary history of the individual. We want vastly more carefully gathered statistics. It has been said that you can prove anything by statistics. That has arisen through the skilful handling of statistics by politicians for party purposes. A competent mathematician trained to deal with statistics can bring out the issue provided that the material collected is adequate and correct. Huxley's analogy of the mathematical process and the flour mill was an apt and sound one. A mill will grind both good and bad grain, and whether you get out sound flour or not depends upon what sort of corn you put in, perchance of wheat or some other grain. Take, as an example, the statistics dealt with by the Registrar-General as to the certified cause of death, and imagine his results with and without an autopsy. When all allowance has been made for what is merely apparent, it is the real increase in

nervous wreckage that confronts us. Where does it come from? In short, what is its heredity? I am not now speaking only of asylum cases, but one would have thought that the asylums would have produced available statistics. I find, however, that Dr. Clarke, of Banstead Asylum, when writing on this subject in the *Journal of Mental Science*, says: "We have no statistics of insanity that are of any practical use. In the tables published annually by the asylums and by the Commissioners, the defective histories swamp and entirely violate the good ones, and no table gives any information as to the normal relatives or offspring of the psychopathic." The treatment of criminals is said to be a failure, and it always will be a failure on the opposing lines adopted and suggested, for the reason that you will not alter the constitution of a man's nervous system by handing him over to the philanthropic humanist, who would treat him as a spoiled child, any more than by putting him in prison. A seizure of "grand mal" is not dealt with satisfactorily, either, by a strong man holding the victim down, or by an old lady administering soothing syrup with kind words. But do we lock up criminals to reform them? Surely we lock them up to protect society, as we excise a cancer to save the individual. Doubtless it is true that, in our administration, cases have been classed as criminals that should have been otherwise dealt with.

It appears to me that some form of segregation, however attained, is inevitable in the not very distant future, if we are to avoid a continuous increase in nervous degeneration. In making a diagnosis in our routine work we get the available facts and marshal them as best we can in order to draw what seems to us the soundest conclusion. But here we have criminals, lunatics, feeble-minded, epileptics, alcoholics, and a host of other neurotic degenerates, and yet we have hardly any facts to guide us as to their origin. It is really remarkable that we know so little not only of the heredity of these unfortunates, but also of our soundest and best stock. Surely it is the duty of a Government responsible for the destinies of a people to obtain information on this the most important factor determining the advance or degeneracy of their population. Powerful and thoughtful indictments have recently been made based on such statistics and facts as are available. Are we allowing to slide what, in his *Social Evolution*, Benjamin Kidd speaks of as "projected efficiency," and, as writers like the Whethams maintain, the sound stock to dwindle while the unsound are rapidly increasing?

Before we cry out in panic for a remedy we ought to demand the facts on which alone a diagnosis can be made. The influence of the medical profession in matters of this kind is great, and that is my reason for venturing to address you on what is only, on its broader aspects, a medical question.

## A CASE OF PERFORATED COMMON BILE DUCT FOLLOWED BY SUBPHRENIC ABSCESS, OPERATION, AND RECOVERY.

By C. CAMPBELL-HORSFALL, M.B., CH.B.VICT.,
NEWQUAY.

THE patient in the following case, a married woman aged 45, had suffered for years from dyspepsia and spasmodic pains which were at times intense and radiated over the upper abdomen and chest. I saw her during two attacks, which were unmistakably due to gall stones, and it was during the last of these that occurred the catastrophe which is the basis of this note.

The patient had been seized with intense pain in the chest and upper abdomen and signs of common duct obstruction, jaundice, bile-stained urine, pale stools, and a moderate degree of fever. She had consented to operation, and this was to take place as soon as the acute symptoms had subsided. On March 14th I had left her comparatively comfortable, but on reaching home I had an urgent summons to return at once. I found her lying in bed quite immobile, pale and cold, pulse 120, and temperature 100°. It seemed that shortly after I had left she had been seized with an agonizing pain causing her to jump out of bed, and then collapsing. There was no rigidity of the abdominal muscles, nor was there any marked tenderness. Deep pressure in the region of the gall bladder produced a well marked diaphragmatic grunt.

The following day there was moderate distension of the abdomen; pulse 120, but temperature falling. From the anamnesis I concluded the common duct had ruptured, and so, with the assistance of Dr. Tonking of Camborne, I proceeded to explore her abdomen.

*Operation.*

Under ether anaesthesia I opened the abdomen through the upper right rectus. On opening the peritoneum bile-stained fluid and pus welled up into the opening. After shutting off the peritoneal cavity an exploration was made of the biliary region, and although one could trace the stream of bile and pus down to the region of the common duct, the actual tear could not be located; the gall bladder was shrunk. A rubber drain was carried down to the common duct and a cigarette drain placed in the right kidney pouch. An incision was next made over the pubes, and Douglas's pouch was found filled with bile-stained fluid; this was gently mopped away and a tube inserted. The visceral peritoneum did not show any marked inflammatory action.

*Progress.*

The pulse was much better after the operation, and the patient was put back to bed in the Fowler position and proctoclysis commenced. She quickly rallied from the operation. Next day she was fairly comfortable, but looked blue and the skin leaky. As there had been no vomiting and she was very thirsty cold water was allowed freely. The tubes were removed on the fifth day. The day following she complained of pain in her left side; the temperature went up to 103°, and pulse 112. A definite fluctuating mass could be made out on the left side.

The same evening under ether I evacuated a large collection of bile-stained material from this side and inserted a drain. There was a good deal of shock after this, but under salines and pituitary extract the pulse recovered and the patient seemed much easier. The temperature fell, but the pulse still remained rapid. In spite of this her condition was not satisfactory, respirations became more frequent, the upper part of the abdomen ceased to move, and on March 25th there was distinct evidence of another collection of matter in the upper abdomen.

*Second Operation.*

Under ether an incision was made through the left upper rectus, and at once one came upon a large accumulation of biliary matter, together with a quantity of mucus similar to the contents of the small intestine. The cavity could be traced up under the diaphragm towards the right side. A large drainage tube was put in and a counter-opening made in the left flank, with through-and-through drainage.

*Result.*

Almost at once there was a marked improvement in the patient's condition, and this continued. During this time she had an attack of pain and evidence of renewed blocking of the common duct, but whatever the cause it quickly subsided, and with the exception of some fluid in the left chest (which has now disappeared) her convalescence has been uneventful, and she is now in better health than she has been for many years past, and instead of denying herself foods is able to eat and digest anything.

This case is interesting, not only on account of the satisfactory result, but because the usual triad of symptoms—pain, vomiting, and muscular rigidity—accompanying an intra-abdominal catastrophe were conspicuous by their absence. There was no vomiting at any time, and previous to the first operation, beyond the distension there was nothing to indicate the focus of infection except the history of the case which was undoubtedly gall stone disease.

Rupture of the common bile duct is extremely rare. Perforations of the biliary system, though by no means frequent, form an important class in the production of abdominal catastrophes. McWilliams has collected 108 cases from the literature.

In a series of 3,180 operations on the biliary system, there were only 29 cases of perforation, or less than 1 per cent. In the series of 108 cases there were only 4 cases of perforation of the common duct.

1. *Kehr.*—Female, 51; symptoms four days; perforation of common duct; cholecystectomy. Died.
2. *Riedel.*—Male, 56; symptoms three days; perforation of common duct and gall bladder; cholecystotomy. Died.
3. *Routier.*—Female, 56; symptoms one day; perforation of common duct, free bile; cholecystotomy. Recovered.
4. *Neupert.*—Female, 42; Symptoms fourteen hours; perforation of common duct at juncture with cystic duct, free bile; cholecystectomy. Recovered.

To this number must be added my own case. The five cases show in a very graphic way the importance of early operation in these cases. In the first two the symptoms had been in progress for four and three days respectively, and both died. The other three were operated on within thirty-six hours after perforation, and all recovered.

In regard to the treatment of these cases, incision and drainage offer the only chance. The procedure in any one case must necessarily depend on the conditions found, remembering always that the patient should be conducted to a cure with the least possible sum total of hazard to his life.

## PELLAGRA IN GREAT BRITAIN:

### *THREE NEW INDIGENOUS CASES.*

BY

LOUIS W. SAMBON, M.D., F.Z.S.,

LECTURER TO THE LONDON SCHOOL OF TROPICAL MEDICINE AND PARASITOLOGIST TO THE WELLCOME RESEARCH LABORATORIES.

To the number of indigenous cases of pellagra so far recognized within the United Kingdom, and published in the JOURNAL of July 5th, I must now add three others, one from Shropshire, a second one from Cardiganshire, and a third one from Napsbury Lunatic Asylum.

The first case was kindly notified to me on July 7th by Dr. L. E. Dickson, M.O.H. Bridgnorth. Dr. Dickson wrote as follows:

The interest attaching to any case resembling pellagra induces me to send you notes of a patient now under my care who presents many of the symptoms described as being present in the cases published in last week's BRITISH MEDICAL JOURNAL. My patient (see figure) is a girl of 7 years, who has always lived in Bridgnorth, and who, I am told by her parents, has never eaten any maize. Up till her fourth year she had no illness beyond childish ailments. She then commenced to have nocturnal enuresis, which has gradually become more troublesome. In her fourth year she also developed so-called "eczema" on the hands and face, which recurred each spring and lasted through the summer, disappearing in the winter. This year the rash appeared in April and has persisted till now, being worse during the sunny weather. About a month ago I was asked to see her, as she had been having some curious seizures which had become very frequent and alarmed her parents. These seizures, I was told, had first been noticed when she was 4 or 5 years old. Her mother says that she always calls out that she is giddy and then has a slight convulsive attack during which her left arm and leg twitch and she falls to the ground, but does not lose consciousness and has never bitten her tongue. They commenced to be more severe about a month ago, at the end of May. I have never seen her in one of these attacks.

The rash on the face and arms is symmetrical, covering the forehead, the malar prominences, the bridge of the nose, and the lips down to the chin. The upper eyelids are clear, and there is a clear space in front of each ear. A separate patch crosses the front of the throat. Both hands and forearms are covered up to the elbows. The skin is red and inflamed; there is considerable branny desquamation. Here and there, there are fissures in the skin, and one or two pustules. The eruption is accompanied by a sensation of burning or "scorching."

The tongue is clear with a little sore-looking red edge, but no actual ulceration. There is hyperaemia round the anus and over the buttocks, but no desquamation. The bowels are generally relaxed, and for a week there has been diarrhoea with offensive musty-smelling pale stools. The urine has been so far normal.

The girl's speech is affected, and she cannot articulate clearly; she is decidedly dull and below the mental standard for her age.

There is constant tremor of the hands, particularly the left, and twitching while asleep. The knee-jerks are slightly exaggerated. She is giddy and cannot stand with her eyes shut and feet close together. There has been no Babinski's sign until to-day.

Last night (July 6th) she had a more severe attack than usual when at tea, and I saw her about 6.30 p.m., when she was lying down, having then recovered from the seizure, which I was told affected only the left side.

This morning I saw her again and found her almost unconscious, breathing rapidly, with a rapid pulse and temperature 101.2° F. The diarrhoea had ceased, and she had taken no food since tea the night before. Her right arm and leg are now rigid, and there is right-sided facial paresis. She can move the arm and leg, but not freely, and sensation is diminished on the right side of the body. There is Babinski's reflex on the right side. No blood count has been made, and no examination of cerebro-spinal fluid.

As I have never seen any case of pellagra, I am unable personally to say whether this present case of mine resembles pellagra or not, and therefore hope I am not unnecessarily taking up your time by writing this short account to you. I need hardly say that if it in any way interests you it will give me pleasure to send you any further details.

Dr. L. E. Dickson's case of pellagra in a girl, aged 7 years, at Bridgnorth. Eruption on face, hands, and forearms.

Dr. Dickson's letter did not reach me until July 10th, when, on wiring, I found that the patient had died on July 8th. Nevertheless, I went to Bridgnorth and saw the body on the morning of July 11th. As I had expected from Dr. Dickson's description, the case was one of typical pellagra. The characteristic symmetrical dermatitis was well marked; it covered the face almost entirely, formed a broad band over the anterior aspect of the neck, covered the backs of the hands, encircled the wrists, and extended over the external surface of the forearms up to the elbows. Both Dr. Dickson and his partner, Mr. S. C. Padwick, who had seen the little girl the day before her death, stated that the skin lesions were of a brownish-red colour. The mother told me that the eruption had appeared each spring in the three previous years, disappearing completely in the winter, when the patient improved so greatly in health that she looked quite a different girl. Both parents assured me most emphatically that the child had never eaten maize in any form whatsoever.

I examined the remaining three children, but found no manifest evidences of pellagra, although, according to the mother, one of the girls seemed to have presented this last spring a slight rash on the backs of the hands. With Dr. Dickson and Mr. Amoruso I drove to the Cantreyn Brook north of the town, where I was told the children

frequently played. Here we found submerged stones and weeds literally covered by the larvae and pupae of *Simuliidae*. We also came across small swarms of the winged forms, and captured numerous specimens which have not yet been determined.

The second case is reported by Dr. D. Owen Williams, of Glandovey, Cardiganshire. He says:

After receiving last Saturday's issue of the BRITISH MEDICAL JOURNAL on the subject of pellagra, it occurred to me that I had recently attended a woman aged 63 or 68 at Borth, a seaside resort in Cardiganshire, who has had an erythema-like dermatitis on the backs of both wrists and hands. They were swollen, brownish-red in appearance, with scales coming off, and I thought that it might be a form of psoriasis. It caused much pain of a burning character. Soothing ointment suited it, and some days it appeared much better, but it soon reappeared again. It comes on in the spring and the autumn. I saw her daughter on Saturday afternoon, and she told me that the patient was much better, and I find that she has had it for a considerable number of years (over twenty). But what was curious in her case was that she had a sunburnt (in appearance) erythematous rash on the bridge of her nose (brownish-red), over an inch in length and about half an inch in width and bilateral. She also had (on the upper lip especially) similar brownish-red sunburn-like patches on the edges of the lips which were also swollen and dry. These patches caused an itching pain. They have now disappeared. When I first saw the patient, on April 4th, she seemed to have had a cold, but with no temperature above normal. She told me that she suffered from intense pain in the head. She also felt a little depressed and occasionally had a little pain in the lumbar region, but there were no other nervous symptoms or signs. She seems to have kept her age very well, and is somewhat stout in appearance.

Behind the house there is the river Serry (two or three yards away), and beyond this again, extending for some miles, is the Borth bog, and running immediately past the back of the house there is a watercourse (very often filled with weeds). This is the first year she had anything on the nose and lips.

This is certainly a case at least for differential diagnosis. I have never heard of any similar case having occurred in the district. Some twenty or thirty years ago there were occasional cases of ague in the villages at the other end of the bog.

What struck me about this woman were the patches on the nose and on the lips, and when I read about pellagra it seemed somewhat curious.

So far I have not had time to see this case, but Dr. Williams's notes leave little doubt as to the possibility of its being a case of pellagra.

On July 15th, Dr. G. S. Blandy informed me of a possible case at the Napsbury Lunatic Asylum, and said that both Dr. L. W. Rolleston, the superintendent, and he would be very pleased to show me the case if I cared to go. This I did at once. I found a young woman suffering from that grave form of the disease known by the name of typhoid pellagra. The patient was lying in a state of coma vigil, with lower extremities in forced extension, the feet in plantar flexion. She presented intense neuro-muscular excitement, tremors, subsultus tendinum, vivid hallucinations. She had been admitted on May 15th with slight fever, rapid pulse, and tendency to collapse, her mental condition being that of acute confusional insanity. About June 16th her physical condition became much worse, and she developed an intense stomatitis. On July 1st a pellagrous dermatitis appeared on face and backs of hands. On the face the eruption affects principally the middle of the forehead, the alae of the nose, the lips, and the chin. On the hands it occupies the backs, extending above the wrists, and forming a deeply pigmented band or cuff around each wrist. There are excoriations between the roots of the fingers and small pustules about the mouth. The mucosa of the lips, tongue, and inside the cheeks is markedly red and denuded. She has a tendency to loose stools. The urine contains albumen.

Dr. Blandy also told me of two other probable cases of pellagra which had died in the asylum—the one in July and the other in November, 1912.

The first was an old woman, aged 74, whose mental condition was one of confusion with motor restlessness and excitement. She was admitted on April 1st, 1912, and had several syncopal attacks while in the asylum. In June she developed a pellagrous eruption and in fact under the date of June 10th we find the following entry: "She recently sustained a burn on either hand as the result of the action of the sun," but the eruption healed very slowly. Towards the end of June she became more demented, and after a severe heart attack she developed bronchial catarrh and died on July 3rd. The autopsy revealed extreme arterial degeneration and chronic nephritis.

The second case was that of a woman, 37 years of age when admitted in 1906. It was a case of manic-depressive insanity, the excited phase predominating. She suffered from stomatitis and diarrhoea, ascribed to her debilitated condition. She also developed a pellagrous dermatitis, but the only mention of it appears in October, 1912, when we find the following entry: "A troublesome dermatitis is only now beginning to clear up." Dr. Blandy remembers that the eruption appeared on the forehead, around the mouth, on the alae nasi and on the backs of the hands. It was supposed that it had commenced as a severe sunburn as the patient had been running about in the open air without a hat, but it continued for so long that this explanation was felt to be very insufficient.

The indigenous cases so far recorded are now sufficient, I think, to show that pellagra is certainly endemic and widely distributed throughout the British Isles. It is to be hoped, therefore, that physicians, especially those practising in rural districts, will soon learn to recognize it, and then we shall know something about its prevalence. My experience of the history, epidemiology and distribution of pellagra in several countries leads me to believe that there must be hundreds of unrecognized cases in Great Britain. As the cases already described amply prove, the disease is one of extreme gravity, and it is to be hoped that, following the example set by the United States, the Government will institute an inquiry.

With regard to the etiology of pellagra, the British cases absolutely disprove the maize theory of its causation.

## NODULAR LEUKAEMIA.

BY

GORDON R. WARD, M.B.LOND.,

LONDON.

A PAPER by Reid, of Belfast, and others in a recent issue of the JOURNAL[1] raises anew the interesting question of the "associated syndromes" of leukaemia. These are four in number, and with the exception of one, chloroma, they are not necessarily a part of leukaemia, but may be met with in other conditions. These other conditions are rather indefinite when one looks at classical descriptions, and in consequence great confusion has arisen. The syndromes have been raised to the status of distinct diseases, and all classes of case showing them have tended to be included as examples of these diseases without reference to their proper classification.

An example will make this more apparent. There may be in leukaemia a great multitude of skin lesions—more or less definite tumour formations—and these may even be preceded by a "pre-fungoid" stage. Such cases have been included in the literature of dermatology as examples of "mycosis fungoides" and "lymphodermia perniciosa of Kaposi." But these titles also cover many cases which, whatever may be their true nature, are not examples of leukaemia. Hence it is correct to state that many cases reported as mycosis fungoides are in reality cases of leukaemia, and the frequent absence of blood examinations makes a final decision impossible. But it is not possible to assert that all such cases are examples of leukaemia.

The four "associated syndromes" are as follows: The first is the syndrome in which one finds symmetrical skull tumours, often of a green colour, but not always, and resulting in blindness, deafness, etc. There may also be lesions of other bones, or, rather, of the periosteum in other situations. This syndrome has usually been called "chloroma," on account of the green colour of the lesions. All cases with a green colour and some others are examples

of leukaemia, but a similar syndrome may arise in suprarenal sarcoma. The green colour may be found in the marrow, etc., of cases of leukaemia which have no skull lesions, and may be absent in the skull lesions of other undoubted cases of leukaemia. Hence the syndrome is unduly limited in one direction and unduly enlarged in another if we make the green colour an integral part of it. Hence the suggestion of the name "nodular leukaemia" for this and some other manifestations, in order that the existence of tumours might be apparent, while the connexion with leukaemia was at the same time not overlooked.

The second syndrome is that above mentioned as the "mycosis fungoides" syndrome. It lacks any other name, and hence is properly included as nodular leukaemia if a multiplication of names that subsequent research may render quite valueless is to be avoided. In these cases there are a number of nodules either just under the epidermis or in the deeper subcutaneous tissue, and these are very commonly more or less symmetrical in distribution. They may come and go with great rapidity, but this is by no means always the case. A similar syndrome may occur in cases of sarcoma, but the leukaemic nodule very rarely, if ever, ulcerates through the skin, whereas the sarcomatous nodule may easily do so.

The third syndrome is often described under the name of Mikulicz's disease. It is characterized by swelling of the lacrymal, parotid, and submaxillary glands. The swelling is usually chronic and painless, and does not tend to suppurate. As a matter of fact this "symmetrical glandular syndrome" is not infrequently of greater extent than would appear, for, besides the glands mentioned, the mammae or ovaries or testes may be affected. The swellings are always symmetrical, and microscopically show an infiltration of the gland substance with cells similar to those seen in the blood. I would include examples of mammary swellings in the syndrome whether the salivary glands were infected or not, since there seems to be no reason to suppose that the problem of their involvement is in any way different from that of the other glands. This syndrome is met with in mumps, and in some other conditions, but rarely.

The fourth syndrome is that of persistent priapism. This of course may be met with in other conditions, but the most common single cause of persistent priapism has been shown by Warthin to be leukaemia. This, like the others, is of the nature of an infiltration, although some of the infiltrating cells may multiply *in situ* and give rise to more or less distinct nodules standing out from the surrounding infiltration. If the infiltration itself is too slight to be appreciated clinically the nodules will appear to be the sole lesions. But even in the case of skull nodules this is not, as a matter of fact, the case; there is always infiltration as well as nodule.

What, then, is leukaemia, if it can be associated with all these different syndromes, not as a result but as a primary and determining factor? In the first place, we are entitled to say that it is one of a definite group of diseases—that is, the generalized affections of blood-forming tissues. In this group are also Hodgkin's disease and the Gaucher type of splenomegaly. It is possible, but not yet proved, that multiple myeloma should be included. In all of these there is something acting which calls into activity the cells of all blood-forming tissues, marrow, glands, spleen, and often thymus and liver. In each of these places autopsy may reveal foci of active growth identical in all places but not of the nature of metastasis nor replacing the original tissue of the part except by passive pressure. All these foci are, in fact, proliferations of cells pre-existing in those positions. In Hodgkin's disease and in Gaucher splenomegaly there is a considerable body of opinion that the endothelial cells are the ones to be stirred up in this way to new and abnormal growth. These endothelial cells are almost certainly those of the lymphatic spaces and channels. In leukaemia we are not so sure what cell is affected first, although we know that a great variety of cells results—just as in Hodgkin's disease the abnormal cells are not all of the same type. But whatever cell it be it is very closely associated with the lymphatic channels, so closely that one cannot avoid the conclusion that it is the carrying off of these cells by these channels which produces the sudden changes in size of spleens, etc. This change is even more marked in the case of skin tumours or nodules. Whence do these come? Probably from lymphatic cells in association with lymphatic channels, for the only parts of the body in which these nodules may not be met with are precisely those in which lymphatic channels are not found—namely, the nerve tissues and cartilage. They may be found in the choroid plexus or on the periosteum, but no nearer. There is no particular difficulty in understanding that whatever calls forth such undue activity in normal blood-forming tissue may also call into existence blood-forming tissue in any part of the body where lymphatic cells and channels are found—in fact, it is clinically certain that this is the case.

It will be noted that this class of case is sharply separated from malignant growths—"cancers." These eat into surrounding tissues, they consume even bone. Leukaemic nodules infiltrate, but do not destroy, and they never touch bone. Other growths cause a reaction in the surrounding tissue—there is no reaction to leukaemic nodules. Sarcoma cells may eat their way through a vessel, and thus a very few fragments of tissue may escape into the blood stream, or they may grow as a solid cord through the length of a vessel, but the cells of leukaemia have natural access to vessels without destroying the walls—hence they are found in the blood stream in enormous numbers, but never as fragments of tissue, always as single cells. There is not on record any case of undoubted sarcoma in which the cells were found in the blood stream during an ordinary blood examination, there are no cases of any sort in which it was alleged that cells of any but a small round-celled sarcoma reached the blood stream, and these latter on investigation are found to be of no value when subjected to criticism. These statements are, of course, not made from a perusal of the literature of the whole world, but yet after considerable attention to the matter.

Leukaemia, as one of the generalized affections of blood-forming tissues, is distinguished by the type of cell involved. It differs plainly from that met with in Hodgkin's disease or in Gaucher splenomegaly. Nevertheless, although constantly different from these, it is not constantly the same. This is because the most specialized cells proliferate first. The stimulus may act on a primitive cell, but at first it is able to send out its children in the clothing to which the world is accustomed. But later the hurry begins to tell, and the daughter cells are less specialized; later still, the primitive cell itself comes forth, and then, as a rule, the patient dies.

The difference between the two types of leukaemia is more difficult to lay down, and, even if an individual view could be stated, it would not be accepted. Fortunately the treatment is the same, so that such a statement would be of theoretical rather than practical interest at the moment.

REFERENCE.

[1] BRITISH MEDICAL JOURNAL, June 21st, 1913.

## A CASE OF ECTOPIA CORDIS.

BY WILLIAM ROLLAND, M.D.,

HONORARY ASSISTANT SURGEON, BOLTON INFIRMARY.

As these cases are of such rarity that they may be looked upon as teratological curiosities, it seems desirable that a recent example of the condition, which occurred in the practice of the writer, should be put on record.

The child was one of twins born on January 25th, 1912. As nearly as could be determined the pregnancy had only lasted six and a half months. The mother was a primipara, aged 38, under-sized, anaemic, and with a generally contracted pelvis. She was attended in her confinement by a midwife, and I was called in later to deal with a very adherent placenta, which had to be removed under chloroform. No history of congenital abnormality could be obtained on either side of the family. One of the twins (female) survived about six hours, its death being due to prematurity. It presented no abnormal condition. The other (male) was born dead, but death had evidently occurred only a short time before, probably owing to the pressure to which the heart must have been subjected during delivery.

*Description of the Specimen.*

The child has the ordinary size and appearance of a 6½ months fetus. (The shrivelled appearance in the photograph is due to prolonged immersion of the specimen in a preserving fluid.) The sternum is fissured longitudinally, the upper ends being about 1 inch apart; the lower ends are united by a transverse cartilaginous band. The costal cartilages unite with each half of the fissured sternum in the ordinary way. The heart is completely extrathoracic, lying in front of the gap in the sternum and held in place by the main vessels, which enter and leave the thorax through the fissure at about the level of the middle third of the sternum. The parietal pericardium is absent except for a small portion of its posterior wall, measuring 2 cm. in length and 1.5 cm. in breadth, which lies over the centre of the gap in the sternum, and is perforated by the main vessels. This portion of pericardium unites at its edges with the skin of the thorax, the two completely filling up the gap which is left between the separated halves of the sternum.

The heart itself has the normal appearance of that of a 6½ months fetus. There is no adhesion of the amnion to the visceral pericardium. No other abnormality could be detected in the specimen.

*Remarks.*

The cases of ectopia cordis which have been reported in this country are very few. Barnardo[1] records a case, closely resembling the present one, in which the child lived for six hours. Another case is noted by Owen and Williams.[2] The subject is very fully discussed by Ballantyne,[3] who gives numerous references to the literature of the subject. Besides referring to cases accompanied by sternal fissure (of which the present one is an example), he points out that there are two other chief varieties—ectopia suprathoracica, in which the heart is displaced upwards into the neck, and ectopia subthoracica, where there is displacement downwards through the diaphragm into the abdominal cavity or the sac of an exomphalos. A case of the latter variety is recorded by Holt.[4]

There seems to be some doubt as to the factors which tend to produce this deformity. Ballantyne suggests arrested development of the thoracic walls as the most likely explanation, and this view is supported by the fact that in some cases amniotic bands have been found attached to the heart and tending to pull it forward out of the thorax.

REFERENCES.

[1] BRITISH MEDICAL JOURNAL, 1896, ii, p. 1639. [2] *Lancet*, 1903, ii, 599. [3] *Antenatal Pathology and Hygiene*, p. 489. [4] *Med. News*, N.Y., 1897, lxxi, 769.

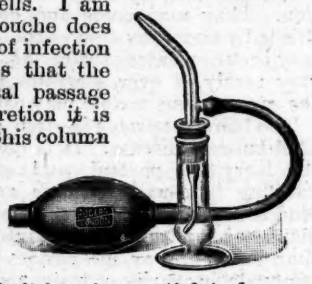
MESSRS. W. H. BEYNON AND CO., fine art publishers, Cheltenham, have issued a set of three drawings by Hanslip Fletcher, of King's College Hospital, which will be of interest to old students of that institution. They show the front entrance facing on to the back of the College of Surgeons, the main staircase, and the interior of the chapel. All three are excellent, and possess the charm which distinguished the Guy's Hospital set by the same artist, which we noticed some months ago. They are well reproduced in photogravure; the subscription for artist's signed proofs printed on indian paper with plate paper mounts is one guinea. The publishers offer to supply the prints complete in oak frames at an extra charge of 13s. 6d. the set. In view of the pending removal of the hospital to Denmark Hill, these drawings will form an interesting memorial of the old building.

# Memoranda:

## MEDICAL, SURGICAL, OBSTETRICAL.

### A COARSE NASAL SPRAY TO AVOID THE DANGERS OF THE NASAL DOUCHE.

THAT there is always some risk attending the use of a nasal douche has long been recognized, and various devices to avoid these risks have been introduced from to time. First, there is the danger of the fluid mass of watery lotion entering the Eustachian tube and, by carrying in the diluted solution of muco-pus and organisms from the nasal passages, causing infection of the middle ear; this danger is so well known that it is sufficient to mention it. Secondly, there is the less recognized danger of spreading the infection from the nasal passages, or from, say, infected ethmoidal cells, to other still healthy sinuses, particularly other ethmoidal cells. I am convinced that the nasal douche does sometimes cause spreading of infection in this way. It is obvious that the lotion injected into a nasal passage forms a solution of the secretion it is intended to wash away, and this column of lotion may find its way into ethmoidal cells, or even into a frontal sinus. The danger is certainly lessened by the patient sniffing up the lotion instead of injecting it, but in cases in which it is not essential to have a mass of fluid flushing the nasal passages, these risks can be entirely avoided by using the far more comfortable coarse spray. As I could find no suitable spray for the purpose in the market, inasmuch as hitherto the fineness of a spray has been its special recommendation, I devised a very coarse nasal spray which Mr. Frank Rogers, of London, made for me, and which for the last two years I have found in every way satisfactory for all cases except those—for example, an antral empyema—in which a douche is essential; even in such cases it is often desirable for the cleansing of the nose apart from the sinus that must be lavaged. Rogers's coarse crystal spray being made of glass throughout, except for the cork and bellows, can always be boiled before using.



The principle of using a coarse spray for lavage instead of the very widely used douche is in my opinion a matter of very considerable importance.

Clifton. P. WATSON-WILLIAMS, M.D.Lond.

### ADRENALIN IN WHOOPING-COUGH.

DURING a recent epidemic of whooping-cough in this neighbourhood, I found that the usual remedies completely failed in one instance—that of a delicate child of 7 years, whose case was complicated by attacks of bronchitis. She had been ill for about six weeks, the paroxysms still continuing to occur, on the average, every three or four hours, and the attacks of bronchitis becoming more and more serious, when I happened to read Dr. G. V. Fletcher's account of his adrenalin treatment of whooping-cough in the BRITISH MEDICAL JOURNAL for December 28th, 1912, and determined to try it.

I began with 3 minims of the 1 in 1,000 solution by the mouth every four hours, and almost immediately noticed a marked diminution in the severity and frequency of the paroxysms. I was soon able to limit the administration of the adrenalin to three times a day, and continued it thus for three weeks, at the end of which time the child had completely recovered from the cough and the bronchial symptoms, and had steadily improved in every other way, there being a total disappearance of the anaemia and wasting which had been produced by the persistent vomiting.

As this case occurred towards the end of the epidemic, I have had no opportunity of trying the treatment in any others, but this one instance seems to me to be so significant as to be worthy of mention.

WILLIAM J. LORD, M.R.C.S.Eng.,
Faringdon, Berks. L.R.C.P.Lond.

# Reports
ON
## MEDICAL AND SURGICAL PRACTICE IN HOSPITALS AND ASYLUMS.

### PARSEE GENERAL HOSPITAL, BOMBAY.

#### A CASE OF COLI INFECTION OF THE BLADDER AFTER HYSTERECTOMY.

(Reported by F. R. PARAKH, M.D., Honorary Obstetrician and Gynaecologist.)

THE patient in the following case, a widow aged 42 years, was admitted on January 19th suffering from severe menorrhagia and metrorrhagia, which had commenced about two years previously. She had had two children, the last one being born twenty-two years before admission. On a previous occasion she had been curetted, but without any benefit.

*State on Examination.*—The uterus was found to be larger than usual, but in its normal position. The appendages and the parametrium seemed healthy.

*Operation.*—I decided to curette the uterus a second time and then cauterize it. For this purpose the cervix was dilated. The canal was brought up to No. 3 Hegar without difficulty, but on passing No. 4 the uterus ruptured in its lower segment, though very little force had been used. In consequence nothing further was done, and the patient was returned to bed. After a week's interval I opened the abdomen and performed a panhysterectomy by Doyen's method. She stood the operation well, and nothing untoward happened until the evening of the eleventh day, when her temperature was 101°, and she complained of pain before, during, and after micturition, constant desire to pass urine, slight burning during micturition, and a feeling of fullness in the bladder. A catheter-drawn specimen of urine showed specific gravity 1017, turbidity of colour, and a trace of albumen, while on centrifugalization a large number of pus cells and *B. coli* were found.

*Result.*—The patient was given a vaccine prepared from her own urine, and the bladder was washed out with boric lotion twice a day. In eight days all the symptoms disappeared, the temperature became normal, and she was discharged completely cured on the twenty-first day.

# British Medical Association.

## CLINICAL AND SCIENTIFIC PROCEEDINGS.

### OXFORD AND READING BRANCH.

AFTER the completion of the business of the annual meeting of the Branch at the Radcliffe Infirmary, Oxford, on July 11th, when the President, Sir WILLIAM OSLER, was in the chair, Dr. LAMBERT showed a case of *Anorexia nervosa*. The illness began two years ago with retching and pain in the epigastrium. She took very little food, and after the retching fits became semiconscious. Her weight was 3 st. 5 lb., more than 3 st. below the normal for her height. As even water by the mouth caused distressing fits of retching, she was fed with nutrient enemata, and later with small quantities of digestible food. She gained nearly a stone in three months.

Dr. FREEMAN (Reading) showed a case for diagnosis for Dr. Stewart Abram. A woman a year ago suffered from vomiting, headache, ataxia, and strabismus. At the present time there was no vomiting or headache, but her gait was ataxic and there was strabismus and some nystagmus. The fundus of both eyes was normal. Cerebellar tumour was the suggested diagnosis.

Mr. WHITELOCKE (Oxford) showed an interesting case—a man, aged 43, from whose thigh he had removed a large tumour, of eight to nine years' growth, growing from the great sciatic nerve. The tumour extended from the ischial tuberosity to the popliteal space, and in the course of removal the sciatic nerve had to be divided; a bridge of the external popliteal nerve was turned up and fixed to the upper end of the divided sciatic trunk. Mr. Whitelocke said he was surprised to find that at the first dressing the patient could flex the knee and move the ankle-joint. The only sensation lost was over the sole of the foot. The gracilis muscle was found to be the chief flexor. He mentioned a similar case recorded by Sir Frederick Treves, and another in which, after division of the anterior crural nerve, the tensor fasciae femoris muscle supplied by the gluteal was greatly developed, and enabled the patient to walk and stand. The tumour was a myxo-sarcoma, and other small fibromatous growths were found on the body of the patient, together with some slight pigmentation about the loins. It was apparently a case of Recklinghausen's disease.

Dr. FREEMAN (Reading) showed a man with a small infiltrated area on the chin, of one week's growth. He worked in a stable, and Dr. Freeman thought it might prove to be the papillary form of actinomycosis. Extragenital chancre had been suggested.

Dr. TURRELL (Oxford) gave a short account of some methods of electro-therapeutics, including (1) ionic medication, (2) high frequency, (3) diathermy. He indicated the chief fields for the use of these various methods, and gave some striking examples of the results to be obtained. Finally he showed 4 cases in process of treatment, where the results could be estimated: (1) Lupus of cheek. (2) Lupus of nose. (3) Birth-mark of face. (4) Acne rosacea.

Mr. E. C. BEVERS (Oxford) demonstrated the use of a filigree wire plaque in a case of ventral hernia, and showed the patient. He followed the method introduced eight years ago by Bartlett.

*Discussion.*

Dr. COLLIER (Oxford) opened a discussion on *Some drugs and their uses.* He drew attention to the use of phenacetin in doses of 20 grains in attacks of influenzal megrim and headache; if combined with 4 grains of caffeine, and half the dose repeated in an hour, success might be obtained when ordinary doses failed. Another drug, potassium iodide, could be given in very large doses in tertiary syphilis; 40 or 50 grains three times a day could be given, especially in cases of syphilis of the brain. Sodium salicylate he advocated for acute rheumatism in doses of 20 grains every two hours, until 80 grains had been given; then 15 grains every four or six hours. He mentioned the huge doses given by Dr. David Lees—100 to 150 grains in twenty-four hours in children with acute rheumatism, the maximum doses reaching 350 to 400 grains. Bismuth he considered should be given before food to relieve pain. He dealt with the use of morphine in kidney disease, and drew attention to the fact that American physicians were the first to advocate morphine in toxaemia, though Sir William Osler, in the last edition of his textbook, gave the credit to Sir Stephen Mackenzie. Finally Dr. Collier mentioned digitalis as an example of a drug which was often wrongly used. All cases of failing compensation of the heart should be treated for a day or two by rest in bed, before using digitalis.

Dr. DUIGAN, Dr. MALLAM, and Dr. LAMBERT took part in the discussion that followed.

---

THE Organizing Committee of the Seventeenth International Medical Congress has granted the use of the geological laboratory in the Royal School of Mines for the meetings of the Universal Esperanto Medical Association (Tutmonda Esperantista Kuracista Asocio). The meetings will be opened by a series of short lectures in many languages on Esperanto and the medical profession. Subsequently only Esperanto will be used. Intimations of papers have been received from Professor Sims Woodhead; Dr. Nemser (St. Petersburg); Dr. Sidlovsky (Moscow), "La rezultato de la enketo pri resukcesantaj infanoj de Moskvaj urbaj lernejoj;" Dr. Robin (Warsaw), "Pri la Sondado de la duodeno;" Dr. F. W. Alexander (London), "Sanigado per marakvo kaj elektro." Others are expected. The London Esperanto Club kindly invites all Esperanto medical men to a conversazione and concert in St. Bride's Institute, Ludgate Circus, on Friday evening, August 8th, at 7.45 p.m. Those who intend to be present at the meetings are asked to send their names to the president of the association, Mr. G. Jameson Johnston, F.R.C.S.I., 13, Lower Fitzwilliam Street, Dublin. The usual annual congress will take place in the University of Berne in the last week of August.

# Reports of Societies.

## EDINBURGH OBSTETRICAL SOCIETY.

AT a meeting on July 9th, Dr. HAIG FERGUSON in the chair, Dr. MCGIBBON, in a paper on *Hereditary icterus*, gave details of a family in which the first child was healthy, but the next five children were jaundiced. The first of these survived, the fourth was stillborn, whilst the others died between the third and seventh day after birth. Dr. F. W. N. HAULTAIN, in a paper on the *Use of veratrone in eclampsia*, reported 7 cases with only 1 death. He had used veratrum viride for many years with success, but the only valid preparation of it, the tincture, was impossible of administration by the mouth if the patient were comatose, and hypodermically it gave rise to much local irritation. Veratrone contained the essential alkaloids veratroidine and jervine, and was given hypodermically in 1 c.cm. doses. It had a marked effect in lowering the high blood pressure invariably present in eclampsia. The author was convinced that the high pressure had much to do with the convulsions. In every case the veratrone had a rapid influence on the blood pressure. Mr. SCOTT CARMICHAEL, in a paper on *Tumours complicating pregnancy*, recorded (1) a case where Caesarean section was carried out in a twin pregnancy near full time for a fibroid growing from the lower uterine segment. After delivery of the twins supravaginal hysterectomy was performed. Three months previously a small tender pedunculated fibroid attached to the uterine fundus had been removed. The operation left the pregnancy undisturbed. (2) The case of a patient six months pregnant, in whom the abdomen was opened for acute intestinal obstruction, a loop of the pelvic colon being found to be encircled and strangulated by the long pedicle of an ovarian cyst. There was severe vaginal haemorrhage. Six days afterwards marginal placenta praevia was recognized, and the child was delivered after being turned.

## ASSOCIATION OF REGISTERED MEDICAL WOMEN.

AT a meeting held on July 1st, Dr. CONSTANCE LONG, President, in the chair, Dr. A. MAUD DODD showed a case of *Adiposis dolorosa* in a woman aged 52. She proposed treatment by thyroid extract. Dr. MARY SCHARLIEB suggested the surgical removal of the masses in the same way that superfluous adipose tissue was sometimes removed from the abdomen. Dr. AGNES SAVILL, in a paper on some of the *Uses of electricity in medicine*, related her results from ionic medication in gynaecological work. An inflamed or ulcerated surface discharging pus healed rapidly when treated with copper or zinc ions, the metal ions being driven right into the substance of the tissue. Erosions of the cervix with muco-purulent discharge, which had resisted ordinary treatment for months or years, were cured in a few weeks. She also described in detail the treatment of a case of severe gonorrhoeal infection of the urethra and cervix, which had been entirely cured by means of zinc and copper cataphoresis in the course of three months. In applying ionic medication large and thick pads of lint (sixteen to twenty layers) should be placed between the metal electrode and the skin, thus enabling enormous currents to be used without causing pain. Discussing the uses of galvanism, the speaker claimed for it great value in the treatment of neurasthenia with gastric and intestinal atony. It was essential to administer small doses at first, and to insist on half an hour to an hour's rest after each sitting. She advocated the use of the rhythmical interrupted galvanic current in certain cases where nervous exhaustion was not marked. In a certain class of case, suffering from toxaemia with tainted breath and coated tongue, the speaker had found the sinusoidal current to be of unique value. These cases were frequently accompanied by indicanuria and perhaps slight pancreatitis, and were not improved by diet and galvanism. By the use of the sinusoidal current to the abdomen, in conjunction with Dr. Cammidge's dietary, excellent results had been obtained in several cases in which diet and drugs had failed. The effect of sinusoidal baths on cases suffering from mental depression was remarkable. The speaker next considered the employment of high frequency in various conditions, both local and general, and warned against its use in cases of low blood pressure, as it reduced the pressure still further and gave rise to fainting. One case of angina pectoris had improved remarkably under the treatment.

# Reviews.

## OBSTETRIC EMERGENCIES.

THE handsome and well-illustrated volume on *Difficulties and Emergencies of Obstetric Practice*,[1] by BERKELEY and BONNEY, merits the attention of practitioners by its form and by the character of its content as well as by the manner of treatment. Omitting the routine in both the physiology and management of obstetric cases in general, it deals with clearness, emphasis, and unusual fullness with each and every aspect where difficulty or doubt is likely to arise. Wherever it is useful the scientific basis of the methods recommended is stated, and the ethical and legal points emerging in practice are handled with judgement, as are also the therapeutic measures necessary in the individual case. In an introductory chapter the difficulties of diagnosis are treated. In the reference to the difficulty of estimating the size of the uterus when the body is in the axial position the useful device of pushing the portio either to the pubic bone or the sacrum, so as to bring the fundus between the hands, is missing, while a search for Fig. 17, mentioned on p. 6, showed that it would have been well to give the page as well as the number of the illustration, which was found on p. 167.

The introductory chapter is followed by a valuable series devoted to affections of the various bodily systems and organs and including a special section on insanity from the pen of Dr. Hubert Bond. These chapters are exceedingly well done and seem to deal with almost every conceivable question, from sudden death to the marriage of first cousins. The prognosis is brought into accord with the most modern experience—a matter of great importance in heart disease and chorea and other conditions where older dogma founded on limited evidence was unduly grave. Misprints are very rare, but we may note the statement, "Acute yellow atrophy sometimes appears in an epidermic form."

Illustrations are freely used to make clear the difficulties arising from special conditions in the genital organs and also the various forms of abortion, from which we pass to the obstetric haemorrhages, where, on the whole, the methods of the Dublin school are approved. The remark (p. 271) that "compression of the aorta is a singularly unscientific proceeding" is a little unexpected from men like the authors, for they place themselves in conflict with most of those who have written on Momburg's method when they say "it has no action in promoting efficient uterine retraction."

A series of chapters on anomalies of the genital tract, presentation, pelvis, and fetus culminates in a detailed treatment of ruptures of the genital tract where the various surgical measures are adequately illustrated. In the chapter on fever in the puerperium, though the pathological basis is fully modern it is interesting to read the measures recommended for the vagina which one would not think of applying to the peritoneum. On p. 467 we read, "After every examination the canal should be swabbed out with pieces of wool mounted on forceps soaked in the antiseptic solution, whilst every labour should be terminated by a thorough irrigation of the vagina." In the puerperium early sitting up and vaginal douching are recommended. In the treatment of fever bacterial treatment is duly weighed, the value of continuous saline infusion is described, and of drugs alcohol is still termed the most valuable. In the section on subinvolution the recommendation of supporting appliances for the abdominal wall, while exercises for the muscles concerned are not mentioned, suggests that one of the essential gains from early movement in the puerperium is not fully appreciated by the authors.

[1] *The Difficulties and Emergencies of Obstetric Practice.* By Comyns Berkeley and Victor Bonney. London: J. and A. Churchill. 1913. (Roy. 8vo, pp. 798; 287 illustrations. 24s. net.)

The description of the operations is well done and fully illustrated and the various forms on the whole duly placed. In decapitation the minor advantage gained are by oblique division which leaves one arm attached to the head and one to the trunk is not mentioned. Under asphyxia of the newborn, while the authors clearly separate the conditions of deficient oxygenation and shock, they overlook the difference of action of the hot bath, and they do not mention the special importance of heart stimulation which can often be got by simple pressure from the precordia. A chapter on artificial feeding ends the text and the volume closes with a clear index which supplements the typographical arrangements that have been adopted to make the text easy of reference.

With due regard to the varieties of opinion, this book must be pronounced well balanced and well arranged, and it is likely to be useful to those practitioners who may find themselves in contact with the difficulties of obstetric practice. The mode of thought has a surgical trend and the authors do not omit to recommend a similar movement in the matter of fees.

## ARTERIO-SCLEROSIS.

THE vast importance of unimpaired circulation through the complex system of vessels in the animal organism can hardly be exaggerated. Hence the integrity of the vessels themselves and the means by which they may be kept in health, or treated when diseased, have constantly engaged the attention of pathologists and clinicians in all countries. A very full account[2] of the state of present knowledge, made especially interesting by the manner in which the compiler puts forwards his own views, reaches us from Copenhagen. Dr. ARNE FABER, a pupil of von Recklinghausen in Strassburg and a practical worker in the schools and hospitals in Denmark, has studied the subject of arterio-sclerosis with a view to ascertaining the part played by disproportionate pressure within the vessels upon the walls of the vessels themselves. Admitting that some cause of weakness must have been produced in the vascular wall, whether from the local incidence of some general infective agency or from toxic influences, anaemia, or other blood condition, he maintains that actual disease first shows itself in the middle coat and that the intima always suffers later. The presence of high vascular tension, from any cause, then becomes an essential factor in the course of the morbid process, and the subsequent changes, particularly those of calcification, are followed out with great detail and well illustrated by a series of plates.

The work is comprehensive and remarkable for the skilled use of historical and general summaries, whereby the interest of the subject is kept alive and the continuity of the arguments maintained. Particular attention is paid to the morbid changes which may affect the elastic tissue, and the phenomena of fatty degeneration and of calcareous deposit are followed out with great care. The chapter dealing with the latter is especially worthy of note. The writer is able to record a considerable series of personal researches into the relations of the pathological changes in the inner and middle coats respectively, showing the influence of various infections or other causes of initial weakness of the vascular wall.

An interesting series of observations upon the vessels coursing in the tendo Achillis is recorded, as these vessels are more prone to calcification as age advances than any other of the smaller arteries of the body. The vessels in the tips of the papillary muscles in the left ventricle of the heart were likewise studied, as being in positions of constant use and activity; and there again the presence of fat globules and of calcareous deposit could be demonstrated in almost every case over 20 years of age. The whole work bears the impress of careful and enthusiastic study and observation and, although of necessity containing much that is familiar, it nevertheless presents old theories from a modern point of view, and will be found most useful as a summarized account of the whole subject, well arranged for reference, and furnished with a remarkably comprehensive bibliography.

[2] *Die Arteriosklerose: ihre Pathologische Anatomie, ihre Pathogenese und Aetiologie.* By Arne Faber, of the Pathological Institute of the Commune Hospital in Copenhagen. Jena: Gustav Fischer. 1912. (Sup. roy. 8vo, pp. 192. 9s.)

## HUMAN EMBRYOLOGY.

MORE than eight years have passed since we reviewed the second edition of Professor A. KEITH'S work[3] on *Human Embryology and Morphology*, and now we have the pleasure of reading the third edition. With the growth of embryology it was inevitable that the work should grow in size. Over 120 illustrations have been added, several of the older figures have been replaced, and the result is that its usefulness to medical students and to medical men has been much increased.

Amongst the improvements to be noticed in the work is the fact that it now has a "real" beginning. Our knowledge of early ova and the implantation of the ovum on the uterine mucosa has been so greatly extended that it is possible to treat the subject of embryology synthetically, or in other words to tell the story from the beginning. To trace the rise of the human embryo from the ovum and the fetus from the embryo to the time about the end of the second month when all the organs are there in miniature, has now, to a considerable degree, become possible. Professor Keith has done well to seize the opportunity presented by the demand for a new issue to recast the first few chapters of the book. The well-known ova of Bryce and Peters naturally find a prominent place in the story, but it is unfortunate that the account of Grosser's remarkable embryo with a chordal canal (described in the human embryo for the first time) appeared too late to be included. Nevertheless, the first forty pages provide an excellent summary of a subject of great and abiding interest to medical men. Professor Keith is no mere descriptive writer. He believes—and in this teachers of anatomy are with him—that embryological facts tend to be barren and meaningless until they are interpreted in the light of our knowledge of the evolution of the human body. It is this attitude which gives the work a place to itself amongst embryological textbooks. On almost every page bare descriptive facts are made intelligible by appeals to evolution, and the bearing of these facts on medicine and surgery is not forgotten. The chapter dealing with the circulatory system is particularly good, and Professor Keith has included therein much of his own work relating to the embryology and pathology of the heart—a subject of great importance and one on which much light has been thrown during the last decade by himself and other workers. The book is now so well known that it only remains for us heartily to congratulate the author on the improvements in this edition, which in many respects is a new work and not a mere revision.

## HEADACHES.

IN his treatise on *Headache*,[4] Dr. SIEGMUND AUERBACH gives a brief account of the several forms of headache, and arrives at conclusions on their pathogeny which, whether they will be generally accepted or not, are at least interesting speculations. He enters into more details on a comparatively unknown affection which he calls "nodular (rheumatic) headache," to which he had already called attention by a paper published ten years ago in Volkmann's *Sammlung klinischer Vorträge*, No. 361. He describes under that name an intense and persistent headache, which he alleges is commonly confounded with migraine or neurasthenic cephalalgia, but which differs from either of these in that it occurs chiefly in women of middle or advanced age; that it is not inherited; that in the absence of complications there is no nausea or vomiting; and that it is associated with nodular eruptions on the head. The nodules are of the size either of a millet seed or of a lentil, or even of a bean, and are situated in the subcutaneous tissue or in the fasciae of the occiput or the nape of the neck; at times also in the upper part of the back of the neck, extending as far as the shoulders. They are said to be very tender, and frequently difficult to detect except by the practised finger of the trained masseur. Of their nature the author is unable to offer a satisfactory explanation. The first observers of these formations attributed

[3] *Human Embryology and Morphology.* By Arthur Keith. Third edition. London: Edward Arnold. 1913. (Med. 8vo, pp. 480; figs. 442. 15s. net.)

[4] *Headache: Its Varieties, Their Nature, Recognition, and Treatment.* By Siegmund Auerbach. Translated by E. Playfair, M.B., M.R.C.P. London: Henry Frowde, and Hodder and Stoughton. 1913. (Cr. 8vo, pp. 214. 5s. net.)

them to an indurative inflammation of either the muscles or of their tendinous attachments or of the subcutaneous tissue; and they accordingly regarded them as products of a myositis or of a cellulitis. From these views Dr. Auerbach dissents. His opinion is that they are caused by "chills," however slight these may be, and more especially by the reduction of the local temperature from the evaporation of the water in washing the head. He surmises that they in all probability consist of circumscribed dilatations of lymph vessels, possibly filled with inspissated lymph; but he has not been able to satisfy himself on that point by anatomical investigation. He has indeed excised one nodule and examined it histologically, but has obtained no convincing results. As matters stand, Dr. Auerbach has never observed the onset of the affection, nor had he an opportunity of watching the course of the process during the development of its products, since all his patients had come under his notice only after they had been suffering for a long time from headache. We are inclined to think that the nodules may be, as he presumes, the cause of the pain. Still, nodules like those referred to occur on the scalp and on the side of the head without more than the slightest transient irritation, and it is not improbable that they differ in their nature and structure, as do the so-called tubercula dolorosa. The author did not look for nerve fibres in the one case which he had examined. But, whatever their origin may be, they are said to readily disappear on massage of the head preceded by the application of hot poultices, and thereon the pain is alleged to cease.

To obviate the difficulty of distinguishing between the numerous forms of headache, especially when it apparently constitutes a substantive disease, Dr. Auerbach urges that there should be a thorough examination of all the organs of each patient after a searching anamnesis. Only by this means will it be possible to obtain reliable data for rational treatment, unless it be supposed that for the cure or relief of headache nothing more is needed than one of the analgesics which chemical industry and commercial speculation have brought to the notice of practitioners and patients. The author has fully stated the several diagnostic elements, and it would be a truism to say that attention to them is of the utmost importance in the proper management of each case. It is only necessary to add that the book has been admirably translated by Dr. Ernest Playfair.

## THE CARE OF PUBLIC WATER SUPPLIES.

THE care of public water supplies is one of the principal duties of sanitary authorities, and into what a wide yet precise science it has now expanded is shown by the second edition of Dr. THRESH'S *Examination of Waters and Water Supplies*.[5] The author writes as one having knowledge born of experience and tempered by judgement, and the great value of the book lies in the critical estimation and discussion of the statements made, and of the various processes described therein. In this second edition he has amplified and extended his previous work, beginning with the examination of sources of water supply, and afterwards discussing the various methods of examining water chemically, bacteriologically, and electrically, subjects on which he is an admitted authority.

In the early chapters he records some interesting incidents which have come within his personal experience, and gives a word of warning in regard to the use of the *Bacillus prodigiosus* as an experimental index of polluted sources. Later on he deals very lucidly with the value of present-day arguments on the utility or otherwise of the *Bacillus coli* group, and the presence of streptococci as indices of contamination, recent and remote. He demonstrates the importance of considering the quality rather than the quantity of the organic and inorganic constituents found in water from whatever source derived, and points out also that in all deductions the history of the water under examination should receive adequate consideration.

In regard to enteric fever, the author makes the pregnant statement that there is no question that many outbreaks of illness referred to drinking water have been due to other causes. There is an obvious and natural inclination to condemn a water supply when other sources of contamination have eluded explanation, but within the last few years the experience anent "typhoid carriers" has frequently cleared up the difficulty in tracing the cause of many obscure incidences of this disease. Dr. Thresh also discusses very ably the potency of the *Bacillus typhosus* in the presence of other forms of aquatic life.

The book is certainly very complete in its scope. The section on the analysis of water ends with a description of the estimation of solids by electric conductivity and the measurement of the radio-activity of water.

The chapters on chemical and bacteriological analysis are careful and full, and the book finishes with a series of plates in black and white, while a ready means of reference to the preparation of various reagents is given in the appendix. The type is clear and the index ample, and the volume can be strongly recommended as a complete and reliable guide and book of reference on the examination of waters and water supplies.

[5] *The Examination of Water and Water Supplies.* By J. C. Thresh, D.Sc.Lond., M.D.Vic., D.P.H.Camb. Second edition. London: J. and A. Churchill. 1913. (Med. 8vo. pp. 664; 16 figures, 36 plates. 18s. net.)

## THE TREND TOWARDS COLLECTIVISM.

THE rapid emergence of collectivism from the sphere of Utopian propaganda into that of practical politics has produced its inevitable effect. The glamour of distance having yielded to the cold light of immediate scrutiny, a strong reaction has promptly set in. Collectivism has reached the politician, and is being put into force by him just at the time when its doctrines are being once more called seriously into question by the philosophers. It has in fact become rather old fashioned, and the vehement confidence with which its exponents proclaim the approaching triumph of its doctrines is probably due to a secret fear that it is now or never, and the apprehension that if they are not quickly translated into legislation the experiment they desire will not be made. Among those who have been most active in the country in popularizing the arguments of the newer or biological school of social reformers are Mr. Belloc and Mr. G. K. Chesterton. Consequently, when we take up a book entitled *The Real Democracy*,[6] and notice that it is inscribed by its joint authors, Messrs. MANN, SIEVERS, and COX, to the former gentleman, we have a fair notion as to its probable tendency and aims. We expect that it will be anticollectivist; that it will insist upon the purely formal nature and practical futility of democracy as at present constituted; and that, as against those who advocate the supersession of private capitalism by State control of the instruments of production, it will contend for the wider distribution of property in general and in particular of landed property among individual members of the community. We may say at once that all these expectations are fully realized. The writers argue that during the past thirty years despite of, or, rather, in consequence of the rapid progress of collectivism, the proportion of citizens working under proletariate conditions, the control of capitalists over the lives of such citizens, over the money market and over the party organizations, and the difficulties of the trade unions in resisting the encroachments of organized capitalists, have all steadily increased. They contend that under existing conditions the mere right to vote, unless reinforced by a power behind the vote—the power of economic resource or, in plain terms, of property—is and must remain of no effect. Reform legislation of the collectivist type, which confers upon the worker gratuitous "benefits" of various kinds, must in their opinion lower his wages by, approximately, the cost of the gifts. Moreover, by depriving him of the right to spend his earnings as seems best to himself, they must diminish his personal independence and his power of resistance—by strikes in particular—to the system which exploits him for its own ends.

Thus, from the point of view of *The Real Democracy*, the net result of the Insurance Act will be "that the resource which constitutes the worker's sole fighting power will be reduced by, in most cases, sevenpence a week." Hence, they say, the present satisfaction of German employers with the similar system initiated by Bismarck, to which

[6] *The Real Democracy.* (First Essays of the Rota Club.) By J. E. F. Mann, N. J. Sievers, and R. W. T. Cox. London: Longmans, Green and Co. 1913. (Cr. 8vo, pp. 235. 4s. 6d. net.)

they were at first strongly hostile. It is in the opinion of the authors a mistake to suppose that it is only the industrial classes and their unions whose independence is being undermined. With reference to the effect of the Insurance Act upon our own profession, they ask: "Who would have said ten years ago that the most honourable and one of the most powerful professions in the country could be thus brought to its knees, and its members reduced to obedient wage-earners, in order to further the plans of a far-seeing capitalist campaign? And if 20,000 skilled professional men, conscious of the honour of their profession and the dignity of their calling, cannot with all their massed resources avert this blow, what in the days to come will be the position of the isolated and timid man of small property? The imminent collapse of the doctors' guild, with its corporate activity and its corporate discipline, is perhaps the most significant warning of recent times, because it is a warning to all men who think or thought that the capitalist system was their defence."

While we appreciate the understanding of and sympathy with our corporate aims revealed by Mr. Mann, we do not think that he has grasped the true significance of recent events in our history. Insurance against ill health or other mischances is not in itself a collectivist device, though in the method of its application and administration it may receive that colour, and the compulsory character of the Insurance Act and certain other of its features have this effect. The profession was therefore placed in a position of peculiar difficulty, and the rough and ready ways of politicians did not allow time or opportunity for a satisfactory solution. We hope and believe that with regard to our own prospects, at any rate, his forecast is unduly black. It is too soon yet to conclude that the ultimate effect of the Insurance Act will be to break up our unity and so rob us of our power to resist future encroachments. Were the occasion appropriate, we could adduce reasons for a contrary expectation. Moreover, to allege that the true objective of the Act is merely to render the industrial classes more effective as dividend-earning machines is a rather sweeping assertion. If, as its defenders hope, it results in a higher average standard of health, it will receive a biological vindication that must take precedence of all political misgivings. "Only from free men," writes Mr. Cox in the next chapter, "can the State get the best work; only when free can a man do his best work for the State." Consequently, since industrial and professional efficiency are avowed aims of collectivism, the State must respect individual freedom on pain of defeating its own object. The last chapter gives some valuable suggestions of means for favouring the wider distribution of wealth, by freeing the source of family livelihood from the possibility of distraint, taxing company profits in proportion to the narrowness of distribution of shares, compelling new companies to offer a large proportion of shares at a small price, and graduating the taxation on transfer or allotment in favour of small transactions. Many other topics are suggestively treated, but we must content ourselves with a strong recommendation of the book to all who are interested in political and economic problems.

## SURFACE ANATOMY.

THE fifth edition of Mr. BATHE RAWLING'S *Landmarks and Surface Markings*[7] calls for little comment except to note that the approval of the book indicated by the rapid taking up of the fourth edition is well founded. There are no alterations in the text, the only changes being some improvement in the illustrations. In making these pictures the author appears to have had a good bright photograph of the limb, and on it to have drawn the various lines boldly to represent tendons, nerves, and vessels. These lines are themselves diagrammatic, but quite accurate enough for practical purposes; each is numbered, the numbers being referred to in the text. Reference, therefore, is rapid and easy, yet the picture as it is constitutes a good exercise for the student. The time seems to have come for departure from the traditional diagrammatic shape, position, and relative size of stomach and colon, in view of knowledge gained by the *x* ray, the bismuth meal, and other means of investigation. The book may well find a place near to the hand of the practitioner as well as on the student's table. It has, we are informed, been adopted as the textbook at the McGill University, Montreal; Queen's University, Kingston; Toronto University, Toronto; and the Western University, London, Ont.

[7] *Landmarks and Surface Markings of the Human Body.* By L. Bathe Rawling, M.B., B.C.Cantab., F.R.C.S.Eng., Surgeon with charge of Out-patients, Demonstrator of Practical and Operative Surgery, St. Bartholomew's Hospital. Fifth Edition. London: H. K. Lewis. 1912. (Demy 8vo, pp. 104; 31 illustrations. 5s. net.)

## NOTES ON BOOKS.

THE second edition of HASKINS'S *Organic Chemistry*[8] does not show any very great differences from the first. Written primarily for medical students, both the selection and the arrangement of the matter differ somewhat from those common to most textbooks of the subject; thus molecular weight determinations, colloidal solutions, osmotic pressure, and other matters usually left to works on general chemistry are included, and the purification and analysis of organic substances are dealt with in a general way before the substances are described in detail. The intention that the book shall be useful to medical students has been borne in mind throughout, in the selection of examples and in other ways. The style is both clear and concise.

The *Tropical Diseases Bulletin*, May 15th, 1913, contains annotations upon pellagra, helmintbiasis, cholera, dysentery, sprue, verruga peruviana, and also some annual reports from British Guiana, Cyprus, Fiji, Gibraltar, Malay States, Montserrat, and Somaliland. The collection of the literature on tropical medicine into a bulletin is proving of very great value to men practising abroad. Whereas formerly they were more or less completely cut off from what was going on in their own subject, they can now see all the literature in a condensed form, with foreign papers suitably translated, and so keep thoroughly up to date. The scheme is a very valuable one, and the Bureau must be congratulated on carrying it out so successfully.

Mr. R. M. WINGENT has issued in book form some very interesting papers which have appeared in the *Guy's Hospital Gazette*. They are arranged in two parts, the first dealing with the non-medical associations of the Borough,[9] the second with the hospitals. A detailed account is given of the use of the two hospitals—Guy's and St. Thomas's—of their rivalry, their union, and their disunion. The philanthropy and the parsimony of Thomas Guy are fully set forth, and many interesting reminiscences are given of the physicians and surgeons of both institutions. We fail, however, to find any reference to that important event in the annals of medical London, the Great Plague of 1665, or to the Foot Guards, afflicted with that distemper, who were admitted to St. Thomas's Hospital, or to Dr. Thomas Wharton, physician to the hospital, and Mr. Edward Rice, the house-surgeon, who remained at their posts when others fled. Without any addition, however, Mr. Wingent's compilation will be dipped into with pleasure by Guy's and St. Thomas's men in their leisure moments.

The introductory chapter of *Disinfection and Disinfectants*,[10] by Dr. M. CHRISTIAN, of Berlin, opens with the remark that "Disinfection is . . . a complicated tool, its application necessitating not only practice but also intelligence—that is to say, a knowledge of the causes and methods of dissemination of infectious diseases; and also familiarity with the methods and sphere of action of the several kinds of disinfection," and in the space of about a hundred pages the author sets himself to impart the necessary knowledge for such intelligent practice. Physical disinfection, by heat—including the action of steam under various conditions—by electric currents, and by mechanical means, is first discussed. The next section is devoted to chemical disinfection, and a further chapter deals with combined systems. Of course no attempt is made, in the space occupied, to enter into the subject exhaustively; but much useful information on the most important aspects of the matter is given in clear language and in a systematic manner, and any one concerned with

[8] *Organic Chemistry, including Certain Portions of Physical Chemistry.* For Medical, Pharmaceutical, and Biological Students (with practical exercises). By Howard D. Haskins, A.B., M.D. Second edition. New York: John Wiley and Sons; London: Chapman and Hall, Ltd. 1913. (Crown 8vo, pp. 443; 25 figures. 8s. 6d. net.)

[9] *Historical Notes of the Borough and the Borough Hospitals.* By R. M. Wingent. London: Ash and Co., Ltd. (Demy 8vo, pp. 129. 3s. 6d. net.)

[10] *Disinfection and Disinfectants.* By M. Christian, Physician in Chief, Royal Institute for Infectious Diseases, Berlin. Translated from the German by Charles Salter. London: Scott, Greenwood, and Son. 1913. (Crown 8vo, pp. 107; illustrations 18. 5s. net.)

disinfection who does not already possess special knowledge of the subject will find this a very profitable little book to read. Certain methods of disinfection, especially of rooms by means of formaldehyde, are described in some detail, and the advantages of different procedures compared; various forms of apparatus are described and illustrated. The book should contribute materially to that intelligent use of disinfection which it is the author's aim to promote.

Those who have read his memoirs will remember how Prince KROPOTKIN, who began public life as page to the Emperor Alexander, in early manhood renounced not only all those advantages of birth and position which most men prize so highly, but also the scientific aspirations for whose fulfilment he seemed eminently endowed by nature, and devoted himself to what he believed to be the cause of the poor and oppressed. The Prince became a revolutionist, and a revolutionist he has ever since remained. In *The Conquest of Bread*,[11] of which a cheap edition has recently appeared, he sets forth his vision of the coming social revolution and his faith in the possibility of its resulting in the establishment of a communist régime of world-wide scope. But only on condition that it proceeds from the outset on the lines of complete expropriation of the means of production and the free sharing of all the necessaries of life. The right to live, interpreted in its fullest sense, is to be universal and unconditional; Kropotkin laughs to scorn the misgivings of those who believe that the majority of men require the dread of the policeman to restrain them from lawless violence or the danger of starvation to keep them at work. He argues that if all healthy adults were for some five-and-twenty years of their lives to give five hours daily to productive work, every member of every civilized community might be well housed, fed, and clothed. It is a high tribute to the power and eloquence of this revolutionary classic that, while reading it, one can hardly fail to be infected by its author's confidence in the immediate feasibility of his visionary aims.

Dr. QUIN DONALD has written a pamphlet, entitled *A New Method of Treatment for Inebriety and the Drug Habit*,[12] on the system adopted by Dr. Alexander Lambert, Physician to the Bellevue Hospital, New York, described in the *Journal of the American Medical Association* a few years ago. A fairly full account of the method as applied particularly to morphine addiction was given in the BRITISH MEDICAL JOURNAL of May 21st, 1910, p. 1249. According to Dr. Quin Donald's account, the treatment is divided into two stages: First, that of preparation, when, the patient being in bed on milk diet, alkalis are administered and free catharsis induced. The second stage is that of specific medication, when a combination of belladonna, prickly ash, and hyoscyamus is given until the full physiological effects of belladonna show themselves. After the first day the daily dose of morphine is reduced by one-half each day until definite abstinence symptoms come on. Free purgation is maintained throughout the treatment, until, after the administration of the U.S.A. pil. vegetabilis cathartica, to which capsicum, ginger, and croton oil have been added, green-coloured stools appear, when 2 oz. of castor oil are given to clear the bowels thoroughly. The morphine is tapered off on a well-defined plan, and at the end of the treatment the patient is said to be relaxed and comfortable, physically weakened, but without desire for drug or drink. Professor Lambert claims that of 375 cases only 46, or 12½ per cent., relapsed, adding that, although the after-history of all the patients could not be ascertained, "yet, if the percentage of known relapses were doubled, the results would still be most gratifying." Dr. Quin Donald regards the method as a valuable addition to the drug treatment of narcomania. The manner in which the morphine is systematically reduced is valuable, but it should be possible to maintain eliminative catharsis by purgatives other than those suggested, whilst the induction of belladonna toxaemia does not demand the special formula of Professor Lambert.

[11] *The Conquest of Bread*. By P. Kropotkin. London: Chapman and Hall. 1913. (Fcap. 8vo, pp. 314. 1s. net.)

[12] *A New Method for the Treatment of Inebriety and the Drug Habit*. By J. Quin Donald, L.R.C.P., L.R.C.S.Edin., Medical Superintendent, Ballyanghrin Sanatorium. Coleraine: *Northern Constitution* Office. 1913. (Pp. 8.)

UNDER the will of the late Viscount Tredegar, the Newport and Monmouthshire Hospital receives a bequest of £5,000 for general purposes; Cardiff Infirmary a bequest of £2,000; and Brecknock County and Borough Infirmary £1,000.

## MEDICINAL AND DIETETIC PREPARATIONS.

### *Portable Reagents for Urine Testing.*

REAGENTS for urine testing have been put up in various forms to facilitate their employment at the bedside; among these forms we have never encountered any more compact, simple, and satisfactory than those provided for certain tests by the "endolytic tubes." The tubes containing the reagents are of about $\frac{1}{15}$ in. diameter, and sealed at both ends; the reagents supplied in this way by Messrs. E. J. Reid and Co. (Basing House, London, E.C.) are salicyl-sulphonic acid for albumen, Fehling's solution for glucose, sodium nitroprusside and ammonium chloride for acetone, and ferric chloride for diacetic acid. To carry out a test a few drops of the urine are spotted out on paper; the ends of the tube are broken off—file marks existing on the tube for this purpose—and a small amount of the urine is then drawn up into the tube, along with the reagent, by capillary action. If heat is necessary, as in the test for sugar, the tube may be held for a few seconds over a match or heated by boiling water. The tubes which we tested had been kept by us for some months, but, thanks to the hermetic sealing, the contents had not in the least deteriorated, and the reactions were obtained most satisfactorily and with great ease. A small metal case which is supplied enables a sufficient supply of the tubes to be carried in the waistcoat pocket.

### *Pellidol and Azodolen.*

A familiar drawback to the use of scarlet red for promoting the growth of epithelium is its strong staining property; in pellidol, Messrs. Kalle and Co. (Biebrich) have introduced a new derivative of amido-azotoluol to which this objection does not apply. Pellidol is diacetyl-amido-azotoluol, and the London agents, Messrs. A. and M. Zimmermann (3, Lloyd's Avenue, E.C.), have submitted a sample for our examination. It is a reddish-yellow powder, insoluble in water but readily soluble in alcohol, and also soluble without difficulty in oil or fat and in soft paraffin; an ointment prepared with pellidol will, therefore, contain it in actual solution, a condition more favourable to activity than if it were merely a powder mixed with the base. Pellidol does not stain, but can be easily removed from the skin or from linen by washing; if its therapeutic action is as good, it will therefore offer a great advantage over scarlet red. A mixture of equal parts of pellidol and iodolen (a compound of iodol and albumen) is also supplied under the name "azodolen"; examination showed this to contain a considerable proportion of iodine, of which 30 per cent. is stated to be present.

### *Novatophan.*

One of the most valuable characters of modern synthetic remedies is the way in which their properties can be modified in a desired direction by some greater or less alteration in the molecule by the introduction of new groups. We referred some time ago to atophan, a synthetic drug recommended for increasing elimination of uric acid; we have now received from Messrs. A. and M. Zimmermann (3, Lloyd's Avenue, London, E.C.) a sample of novatophan, a modification of atophan recently introduced by Messrs. Schering, Berlin. This is described as the ethyl ester of methylated atophan, and it has the advantage of being tasteless. It is claimed that its clinical effect is the same as that of the parent substance; it is insoluble in water, and is supplied in tablets containing 0.5 gram (7½ grains), which readily disintegrate when placed in water.

### *Barium Sulphate for X-Ray Work.*

The large quantities of bismuth salts which have to be given for the purpose of *x*-ray examination of the stomach and intestines have, in some cases, led to undesirable results, and it has been proposed to use instead some quite insoluble substance, such as barium sulphate; it is, of course, necessary that soluble barium salts should be entirely absent from the specimen used. Mr. E. Merck (16, Jewry Street, London, E.C.) has submitted a sample of barium sulphate specially prepared for this purpose; it is a fine, perfectly smooth powder, free from soluble barium salt. We found, however, that prolonged contact at body temperature with acidulated water corresponding in strength to gastric juice caused a trace of the sulphate itself to pass into solution, the amount being greater when stronger acid was used. Evaporation of the solution caused the dissolved sulphate to be deposited again in an insoluble form, and it seems probable that any trace dissolved in this way in the stomach would not be absorbed.

## THE INEBRIATES ACT.

THE report[1] of Dr. R. W. Branthwaite, Inspector under the Inebriates Acts, for the year 1911, which was issued recently, relates to the working of retreats, certified inebriate reformatories, and State inebriate reformatories, and includes a large amount of statistical information.

*Retreats.*

A considerable amount of space is devoted to the subject of retreats, it being pointed out that the existence of these institutions is known to comparatively few persons, with the result that their efforts are insufficiently appreciated. This, although probably to a great extent inevitable, is none the less regrettable in view of the fact that they are doing much good work in a dignified and unassuming way, and that its value would be materially enhanced if greater use were made of the facilities retreats present. Patients in retreats are of two classes—those whose continued residence thereat depends entirely on their own will, and those whose admission for a stated period has been the result of a request for reception signed by the patient before a justice of the peace, coupled with a statutory declaration signed by two persons who can testify that the applicant is an inebriate within the meaning of the Act of 1879 as amended by the Act of 1898. A retreat must be licensed by the county or borough of the area in which it is situated, and at present there are 19 of them at work. Altogether since 1879 over 10,000 persons have submitted themselves for detention at them, and this Dr. Branthwaite considers a satisfactory result, having regard to the pessimistic attitude adopted towards these institutions during the earlier years of their existence and the many difficulties encountered by persons who have endeavoured to manage them under inadequate powers.

In the aggregate the number of persons for whom the 19 retreats are licensed is 397, their total accommodation being 566. About one-third of them are under the direct control of medical men, while all of them have a medical officer attached. Between them they present a fair range of choice, treatment and accommodation being obtainable at rates varying from 10s. or 15s. a week up to 5 guineas, or even more. There is, however, no provision for persons who, although willing to become inmates of a retreat, are prevented from doing so by their inability to make even the smallest weekly payment. In this connexion Dr. Branthwaite asks:

> In the midst of so much philanthropic effort, is it impossible to hope for the formation of an endowment fund for an institution for destitute inebriates? In the old days, when habitual drunkenness was regarded as wilful degradation, wholly vicious and hopeless, there might have been justification for withholding assistance; but now, when the psycho-neurotic aspect of the condition is fully realized and when the value of timely help is indisputable, the justification is on the side of giving assistance rather than withholding it.

In regard to the medical aspects of retreat work, it is pointed out that in most of retreat cases there is the same mental defect which is so evident in the patients to be found in reformatories. This mental weakness is only less apparent in the retreat cases because so far they have not experienced the years of misery, neglect, and degradation so closely associated with the previous life of the average police-court habitué. Once this fact is realized, the practice of making all the routine of a retreat subservient to medical necessities becomes clear. Moral and religious teaching are excellent aids to treatment, since they stimulate and encourage the exercise of self-restraint, but it is useless to teach resistance to those who have not previously been lifted out of the physical and mental condition into which they have drifted. Medical treatment and moral teaching are both probably essential, but it is the former that should first be undertaken. Hence it is encouraging to note that the belief that long-continued detention without more energetic physical handling suffices, is ceasing to prevail. At the best retreats supplementary measures, such as judicious medication, hypnotic suggestion, electricity, baths, massage, gymnastic exercises, and regular occupation, are being employed. At all of them drug administration is being employed as an ordinary matter of routine during the acute distress which follows the withholding of alcohol, and at most a drug course of some kind is pursued until health returns. At some retreats, indeed, it is on therapeutic treatment that chief reliance is placed. To imply, therefore, as is sometimes done, that drug treatment and retreat work represent two entirely different fashions of dealing with inebriates is, to say the least of it, foolish.

> Medical treatment, including the administration of drugs when necessary, is essential to the proper conduct of a retreat, and for that reason no licensed institution is permitted to exist without the appointment of a medical officer; but those in charge have no need to rely, as outsiders have to do, upon systematic and continuous drugging to obtain a result that can be better obtained without resort to artificial and sometimes injurious means.

The number of persons admitted to retreats during the year was 459 (181 men and 278 women), but only 151 of these were admitted under the Act—that is to say, were patients obliged to remain for the full period for which they had sought admission, and who could be forcibly detained if necessary. This number does not represent any falling off from the record of previous years, but by no means implies that the establishment of retreats has been followed by all the results anticipated by their original promoters. In this connexion Dr. Branthwaite once more puts his finger on the main reason for the failure of the Inebriates Acts to fulfil the needs which they were expected to meet. The Acts provide for inebriates who realize their condition so fully as to be ready to consent to put themselves under restraint; they provide also for those who have become more or less hopelessly degraded or criminal, but for a much larger class than either of these two they make no provision at all. Any person who manages to drink to excess without committing a crime, or is otherwise able to avoid arrest, can continue his drunken habits with impunity, notwithstanding the fact that he may be causing poverty and untold misery to all around him, and sooner or later heavy expense to the sober members of the community. The only possibility of getting such a person under control depends upon the somewhat remote chance of being able to persuade him to make a request for admission to a retreat under the voluntary sections of the Act. Comparatively few persons can be induced to take this action, so the existing law is capable of application only to the extremes mentioned.

To a subsidiary cause of failure reference has already been made—namely, the absence of retreats for inebriates who have not the means of paying for their maintenance and treatment. Every year literally hundreds of persons, the report states, apply for admission to retreats who are unable in the event to avail themselves of this chance of recovery owing to the impossibility of their finding the necessary money. If, suggests the report, there were founded an industrial retreat for 500 or 1,000 inebriate persons destitute, but not yet criminals, an urgent demand would be met. It is comparatively easy to arouse public sympathy in regard to epileptics, consumptives, the insane, the sick, the orphaned, and those deprived of the organs of special sense; even in regard to criminals who require control in the interests of the public rather than their own, many efforts are made to temper punishment by assistance after imprisonment; but in regard to inebriates the position is different.

> The sentence "he drinks" signifies disgust, refusal to help, and carelessness as to the future; no adequate organization is available to lend a helping hand at a time when assistance would be of value, with the result that degeneration is progressive, and police courts and prisons saddled with still another recruit for the recidivist drunken class. When this stage is reached, and the case has become more or less hopelessly degraded, means are provided for an attempt at reformation; but, pending the gift of new powers, can nothing be done to develop those that already exist, and apply them to the work of preventing cases from reaching this stage? When an individual has reached such depths it is generally too late to expect reform, whereas the application of rational measures during the earlier stages of the habit would certainly lead to the saving of many for future usefulness.

Finally the report states that there is little fault to be found in regard to retreats generally, and every reason for satisfaction in respect of the interest shown by licensees in their work.

[1] The Report of the Inspector under the Inebriates Acts, 1879 to 1900, for the year 1911. London: Published by H.M. Stationery Office. Cd. 6322. (Price 4d.)

*Certified and State Inebriate Reformatories.*

The sections relating to certified inebriate reformatories and to State inebriate reformatories present less matter of direct medical interest, since the inmates of these establishments are for the most part very advanced cases, and all are persons who in one way or another have brought themselves within the net of the criminal law. Certified inebriate reformatories may be established and maintained by county councils, or by any person approved by the Secretary of State, and there are at present nine of them in existence. The persons admitted to them are always habitual drunkards who have either been convicted of offences punishable in ordinary cases by imprisonment or penal servitude, or who have been convicted not less than three times within the preceding twelve months of being "drunk and disorderly" or drunk in charge of a vehicle or of a child. The number committed in 1911 was in the case of males slightly lower than in the previous year, and in the case of females slightly higher, the aggregate number being practically equivalent to the average for the previous ten years.

In earlier reports Dr. Branthwaite has discussed at considerable length the reasons why the law courts make what must be regarded as exceedingly restricted use of the powers granted them by the Act of 1898. In the present report he mentions that it is the authorities of Lancashire, Middlesex, and London who are mainly responsible for any work done in this connexion, the majority of the counties making no use of the Act at all. Indeed, in the space of thirteen years only 532 persons have been committed altogether, and in the vast majority of cases the convictions have been in respect of neglect of children in a criminal sense. This is somewhat curious, seeing that one factor in the passage of the Act of 1898 was a complaint as to absence of power to deal with criminal inebriates otherwise than by consignment to an ordinary prison, and that after the Act came into force there was an outcry as to lack of means for taking advantage of its clauses. There is now plenty of accommodation, but it is not utilized. The explanation suggested in the report is to the effect that apart from failure to appreciate the value of this section on the part of the present occupants of the bench throughout the country, the procedure involved when it is desired to commit an offender to an inebriate reformatory introduces unnecessary difficulties. On this point recommendations were made by the Departmental Committee of 1908, and it is hoped that they will receive attention in the Inebriates Act Amendment and Consolidation Bill which is one of the many measures now awaiting consideration by Parliament.

Of State inebriate reformatories there are only two, one at Aylesbury for women, one at Warwick for men; at the former the average daily number of inmates during the year was 52, at the latter 25, these numbers both representing decreasing figures. These reformatories were originally intended for the reception of habitual drunkards convicted of offences punishable by imprisonment or by penal servitude, who, it was anticipated, would prove unmanageable in the less prison-like reformatories established and maintained by local authorities or by philanthropic bodies. It was found, however, that inebriates of this class proved more amenable to discipline than the ordinary police-court habitual drunkard, and of late years they have been used solely for the detention of persons who refuse to submit to control elsewhere. Of those who left the Aylesbury institution during 1911, 3 were transferred to asylums, and 1 was retransferred to a certified reformatory as a reward for good conduct. The report speaks very favourably of the way in which all the certified and State reformatories are managed, and indicates that the total weekly expenditure for each inmate at the former institutions varies between 12s. and £1 0s. 10d.

---

DR. VICTOR C. VAUGHAN, Professor of Hygiene and Physiological Chemistry, and Dean of the Department of Medicine and Surgery in the University of Michigan, was elected president of the American Medical Association at the annual meeting recently held at Minneapolis.

THE late Sir Charles John Stoddart, of Rotherham, in addition to making a bequest of £1,000 to Rotherham Hospital, directed that the establishment of a Samaritan Fund in connexion with the institution should be one of the objects considered in dealing with the residue of his estate, which appears likely to be of considerable value.

## SEVENTEENTH INTERNATIONAL CONGRESS OF MEDICINE (LONDON, 1913).

### Section of Dermatology and Syphilography.

THE Section of Dermatology and Syphilography is under the presidency of Sir Malcolm Morris, K.C.V.O., and the meetings will take place at St. Thomas's Hospital Medical School. The Section is greatly indebted to the Treasurer and Governors of the hospital for their generosity in granting the use of the school buildings, and to Dr. Stainer, the Dean, for his assistance in regard to the arrangements. The large meetings are to be held in the Hall of the hospital, while the smaller meetings will take place in the two theatres in the school. Ample accommodation is also afforded for the museum of models and illustrations, for the exhibition of microscopical specimens, and for the demonstration of rare cases of cutaneous disease. The Students' Union will be used as a club, and the terrace will be a pleasant meeting place for the members and give foreign guests an opportunity of appreciating one of the most attractive scenes in London.

*Discussions.*

The subjects which have been selected for discussion are the following:

1. Epithelioma of the skin, benign and malignant, which will be introduced by Dr. Darier of Paris, who reported on the same subject at the Dermatological Congress in Berlin in 1904, and who will record the advances made since then; the other reporters are Dr. J. A. Fordyce of New York and Dr. Jadassohn of Berne.
2. A discussion on alopecia areata and allied conditions will be opened by Professor Pellizzari of Florence and Dr. Sabouraud of Paris.
3. A discussion on syphilis, its dangers to the community and State control, conjointly with the Section of Forensic Medicine; this will be introduced by Professor Finger of Vienna, Professor Gaucher with Dr. Gougerot of Paris, Dr. Blaschko of Berlin, and Major French, R.A.M.C. As this subject is of the greatest importance to the general health of the community, it is expected that the meeting will attract a large number of members, and consequently it has been decided to hold it in the Albert Hall on Saturday, August 9th, at 9.30 a.m.
4. A conjoint discussion with the Section of Naval and Military Medicine on the treatment of syphilis by salvarsan and allied substances, which will be opened by Professor Ehrlich of Frankfort, Professor Neisser of Breslau, Professor Vennin of Paris, while this country will be represented by Major T. W. Gibbard and Major L. W. Harrison, R.A.M.C.
5. A discussion on the vaccine treatment of diseases of the skin, which will be introduced by Professor T. C. Gilchrist of Baltimore and Professor Arthur Whitfield of London.

Papers, some dealing with the subjects under discussion, and others on independent subjects, will be read and discussed at the afternoon sessions of the Congress.

Special attention will be paid to the clinical aspect of the subject, and demonstrations of interesting cases will be held before the morning and afternoon sessions. These cases will be grouped as far as possible to illustrate the subject under discussion on each day.

*Entertainments.*

Arrangements are now being made for the entertainment of the members. On account of the large number which are expected, it has been found necessary to abandon the idea of a sectional dinner, and it has been decided instead to hold a reception at Prince's Restaurant on Monday, August 11th, at 9 p.m. A garden party will take place at St. Thomas's Hospital on one of the afternoons. A Ladies' Committee has been organized under the direction of Lady Morris to provide entertainment for the wives and daughters of the members.

The Secretaries of the Section are Dr. R. Cranston Low (Editor of *Transactions*), Dr. J. M. H. MacLeod (Acting Secretary), Dr. H. Leslie Roberts (Provincial Secretary), and Dr. J. H. Sequeira (Secretary in charge of Museums and Clinical Demonstrations).

### Section of Therapeutics.

The Section of Therapeutics comprises also the subjects of pharmacology, physio-therapy, and balneology. It is under the presidency of Sir Lauder Brunton, Bart., F.R.S. The secretaries are Professor W. E. Dixon, F.R.S., Dr. Fortescue Fox (for physio-therapy and balneology), and Dr. R. A. Young (Acting Secretary).

The meetings of the Section will be held in the astrophysics laboratory of the Imperial College of Science and Technology, South Kensington. A laboratory meeting is

also being arranged to take place in the Pharmacological Institute of University College by kind permission of Professor A. R. Cushny, F.R.S., one of the vice-presidents of the Section. Facilities will be offered for the experimental illustration of any of the special papers which lend themselves to it.

*Discussions.*

The following discussions have been arranged:

*Thursday, August 7th.*—On defensive measures of the organism against foreign substances in the blood. To be opened by Professor Paul Heger of Brussels and Professor E. Abderhalden of Halle. Professor Ehrlich and Professor J. B. Leathes have expressed their willingness to take part in the discussion.

*Friday, August 8th.*—On the action and use of remedies for pain and sleeplessness (excluding anaesthetics, local and general). To be opened by Professor Hans Meyer of Vienna and Professor A. R. Cushny of London. Dr. R. B. Wild, Dr. Robert Jones, and Dr. Risien Russell also intend to speak.

*Monday, August 11th.*—On the comparative value of cardiac remedies. To be opened by Professor R. Gottlieb of Heidelberg and Dr. Theodore C. Janeway of New York, U.S.A. Professor Ferrannini (Camerino) and Dr. J. D. Windle are also expected to join in this discussion.

*Thursday, August 14th.*—On thermal treatment, its indications, limitations, and risks. To be opened by Professor Landouzy of Paris and Professor Vinai of Turin. Dr. Zagner of Berlin will also take part.

The afternoon sessions will be devoted to the reading and discussion of independent papers. The morning of the day (Saturday) on which the laboratory meeting is to be held will also be available for papers on the subjects of balneology and physio-therapy. A considerable number of papers have been offered to the Section, but as yet few have been received from British observers.

It is proposed to hold the sectional dinner on Friday, August 8th, at the Mitre Hotel, Hampton Court. The arrangements in regard to this are being made by Dr. O. F. F. Grünbaum.

A ladies' committee is being formed to assist in the entertainment of the foreign ladies attending the Congress.

## ANNUAL REPORT OF THE CHIEF INSPECTOR OF FACTORIES AND WORKSHOPS FOR THE YEAR 1912.[1]

IT is seldom that a year passes without the passage of some legislation affecting the Factory Department of the Home Office, but in 1912, beyond the passing of an Act requiring that *power gas* shall have a "distinctive and readily perceptible smell," there was no new legislation. Several departmental committees are at present sitting, and their reports are expected. To Professor Kent has been entrusted the task of carrying out at Bristol University research work into the subject of fatigue in industrial occupation. The inquiry is opportune, and his findings ought to be interesting. Dr. Heywood, certifying surgeon in Darwen, is, in a similar manner, undertaking an inquiry into the physique of young persons employed in the cotton trade.

During 1912 a larger number of accidents occurred, a circumstance attributed to the increased activity of trade. Ordinarily, accident risks are greater in busy times, since less skilled persons have to be employed on additional machinery. Better reporting may also explain the increase, but many accidents are due to causes over which there is no control. The notification of non-fatal accidents is not so complete as it ought to be, since the returns under the Notification of Accidents Act, instead of exceeding, are lower than those under the Compensation Act. The fatal accidents for 1912 were 1,260, as against 1,182 for 1911 and 1,080 for 1910. The non-fatal accidents reported to inspectors of factories only, and excluding those reported to factory surgeons, were for 1912, 105,036, and for 1911, 99,944. The total number of accidents was 117,275 for 1912 and 114,442 for the previous year.

The number of factories and workshops under inspection for 1912 was 298,077; the number of effective visits paid under the Act was 404,722, including 44,042 outside the ordinary hours for protected persons. It is always pleasant to hear of fresh industrial developments. Among the new industries which have sprung up in this country mention may be made of the manufacture of beetroot sugar near Norwich, and of buckram in Stockport. In consequence of the influx of colliers into the Doncaster district such industries have sprung up for women as worsted spinning and blouse making.

So far as female labour generally is concerned, most of the complaints which have been made by workers are connected with excessive hours of employment of young girls, and the carrying of heavy weights by women and girls. Notwithstanding all that legislation has effected for the provision of sanitary conveniences for women, it is lamentable to find that factories are still allowed to be built in which arrangements of the kind are neglected. The responsibility may rest with the local authorities, but why are the plans not also submitted to the Home Office? In all factories where female labour is employed on a large scale a woman, or women, ought to be told off to supervise such places and see that they are kept in a proper manner. A similar remark applies equally to places for men, men of course taking the place of female caretakers. There is a reduction in the number of accidents in laundries in 1912, the number being 400 as against 412 for 1911. Not only has the number of accidents fallen, but their severity as well. In the reports of the lady inspectors dealing with fire risks and fire escapes attention is directed to the fact that women engaged in processes in which outbreaks of fire are not uncommon are frequently found wearing celluloid combs. To the high proportion of married women employed in the Dundee mills is attributed the large number of maladies peculiar to their sex and the excessive infant mortality.

Explosions in oil-cake mills and seed-crushing works are dealt with at considerable length by the Inspector of Dangerous Trades. There was an increase of mechanical (non-electrical) accidents at electrical generating stations by 25 per cent., but the number of electrical accidents was the same as for the previous year, namely, 58, and the fatalities the same, namely, 4. Most of the accidents occur during the cleaning, repairing, and the handling of switchboards which are supposed to be "dead." The Electrical Inspector of Factories reminds factory owners and operatives of the means to be adopted for the restoration of persons apparently dead from electric shock. Mention is made of similar advice given by Dr. Reginald Morton as to the importance of immediate and long-continued efforts for resuscitation by artificial respiration. In some instances this may have to be carried on for two hours.

The medical inspector in his report draws attention to several inquiries which have been carried on by Dr. Edgar Collis in regard to phthisis in stonemasons and granite cutters, as a result of which the view is put forward that silica is the constituent in dust which causes phthisis.

Dr. Legge states that, while there is a diminution in the figures of lead poisoning for 1912, they compare unfavourably with 1910 and 1909. The figures for 1907, 1908, 1909, 1910, 1911, and 1912 respectively are 578 with 26 deaths, 646 with 32 deaths, 553 with 30, 505 with 38, 669 with 37, and 587 with 44 deaths. There were more deaths from plumbism in 1912 than in 1911. In the china and earthenware trade alone there were 8 deaths more in 1912 than in 1911, 14 as against 6. To the inhalation of dust in lead industries is attributed most of the plumbism. Get rid of the dust, and much of the illness will disappear. The influence of fume, however, must not be forgotten. Five cases of arsenic poisoning occurred, 3 of which were due to the handling of bird skins. From seven boxes containing bird skins imported from the East Indies, 16 lb. of arsenic was collected. The men who emptied the boxes suffered from sore throat, diarrhoea, hypochondriasis, and thirst.

Anthrax caused fewer deaths in 1912 than in the preceding year. The Anthrax Investigation Board is still carrying on its investigations; the experiments show that the steaming of blood clots for fifteen minutes will kill anthrax spores, provided the wool is kept sufficiently loose to be penetrated by steam. In speaking of the symptomatology of brassfounders' ague, the views of Professor Lehmann, of Würzburg, are stated. He believes that the symptoms are due to zinc and not to copper. Ague-like symptoms develop in men when they are burning chemically-pure zinc. An almost identical set of symptoms appears in animals after the injection of albumen.

The relation of pulmonary tuberculosis to inorganic dust, already alluded to, is shown in tabular form. From

[1] His Majesty's Stationery Office [Cd. 6852], 1913; 2s. 5d.

the tables it is seen that the high rate of mortality in certain occupations is proportional to the amount of silica present in the dust which is inhaled. The comparative absence of pulmonary tuberculosis in cement workers, for example, is explained by cement being free from silica.

In material of scientific interest and as a record of work done, the annual report for 1912 compares most favourably with its predecessors

## PROPOSED MEDICO-PSYCHOLOGICAL CLINIC IN LONDON.

A MEETING was held at 32, Gordon Square, Bloomsbury, on July 10th, to discuss the founding of a Medico-Psychological Clinic in London. The chair, in the absence of Lord Sandwich, was taken by Mr. BLIGH.

Dr. HECTOR MUNRO said that it was proposed to start a clinic where certain diseases might be treated by means of psycho-therapy, and where a practical alliance might be brought about between psycho-therapy and general psychology. The object of the clinic was three-fold—to provide a place where treatment by psycho-therapy might be carried out, to bring this method of treatment within the reach of the poorer classes, and to provide inquirers with opportunities for study and investigation.

Dr. SPEARMAN, Professor of Psychology in University College, said that psycho-therapy, which had been practised for the last two thousand years, had undergone certain changes in modern times, and was becoming more and more widely known and needed. Psycho-analysis was, after all, nothing but an extension of the process followed in every psychological laboratory; and no one who knew anything of the subject could doubt that the foundation of the proposed clinic would be of very real and valuable service to science.

Dr. CONSTANCE LONG said the psychological moment for the foundation of the clinic had arrived, for the public were beginning to ask that psychic disorders should be treated in a psychic way. The readiness of the public for psychic medicine was shown by the rapid growth of Christian Science amongst educated people. The speaker hastened to explain that psycho-therapy had no connexion with the doctrines of Christian Science, the present movement, indeed, being anathema to the professors of that creed. Dr. Long added that the supporters of the scheme did not propose to break new ground, but merely wished to follow the pioneers who had been working on these lines in London for the last thirty years. They proposed to use all forms of psychic treatment, such as persuasion, re-education, psycho-analysis, and even hypnotism; and they hoped thus to form a centre where psycho-therapy might not only be obtained, but studied.

Dr. LLOYD TUCKEY said that he had made use of hypnotism for many years. One reason why the medical profession should give its support to the clinic was that if legitimate medicine did not give the public what it wanted, the public would go elsewhere.

Dr. MAURICE WRIGHT said that the clinic should be of great value to all doctors who employed psychic forms of treatment, as up to the present this sort of work had only been done by isolated units, and there was great need for co-ordination. Another point in favour of the clinic was that it would be of assistance to neurologists and alienists. Psycho-neurotics were to be found in every class, and such cases amongst the very poor were in urgent need of help. If the clinic only devoted itself to the treatment of alcoholism it would amply justify its existence.

Dr. WILKINSON said that the Medico-Psychological Clinic in Liverpool, which had only been in existence for nine months and started with twenty patients a week, now had on an average about sixty. Patients came to Liverpool from every part of the country, so that the Liverpool clinic really did work for the whole of England. He added that, though England was really the home of this treatment, it was practically the last country to adopt it.

Dr. WINGFIELD said that he was more interested in the experimental than in the clinical side of the movement, because it was many years since hypnotic experiments had been carried out in this country, and the proposed clinic would offer an almost unique opportunity for such experiments. As regards psycho-analysis, it was impossible in general practice, and he doubted if it would ever come into general use in this country. But it was his firm belief that enormous good might be done by means of psycho-therapy in cases of alcoholism, and that chronic drunkards who had undergone a course of psycho-treatment might be so far cured as to regain sufficient self-control to keep from drinking for several months at a time.

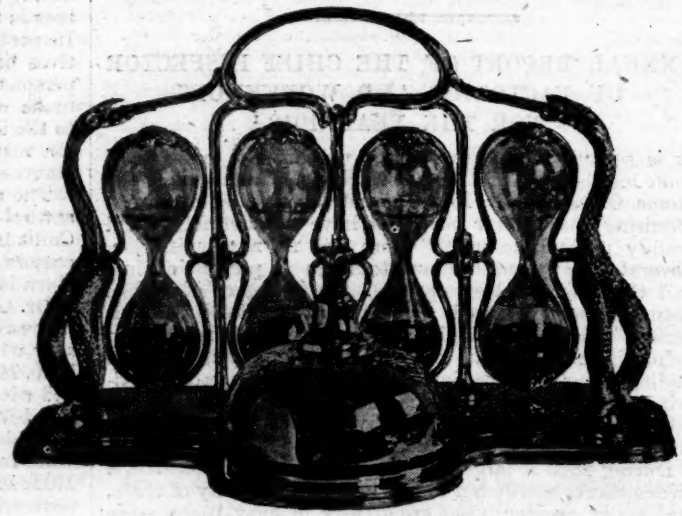
A discussion followed the speeches, in the course of which Dr. JESSIE MURRAY said that it was proposed to rent four rooms in some quiet place within easy reach of University College, where patients could come for treatment. The nominal charge for each visit was to be half a crown, but, as it was hoped that a large proportion of the patients would belong to the very poor, the smallest offerings would be received. It was hoped that in time the clinic would be self-supporting.

The Medical Committee consists of Drs. Hector Munro, Jessie M. Murray, John Spencer, and Constance E. Long. The Honorary Secretary and Treasurer is Miss J. Turner, 14, Endsleigh Street, Tavistock Square, W.C.

## GIFT TO THE REPRESENTATIVE BODY.

*Duration of Speeches.*

DURING the discussions in the Representative Body it has been found necessary to limit the time during which a speaker may address the meeting to five minutes, or even to three minutes. In order to facilitate the application of such a rule the Brighton Division has had prepared for presentation to the Representative Meeting a silver stand containing four hour-glasses. As will be seen from the illustration, the framework holding the time glasses is



modelled with serpents for supports. Of the four glasses, two are timed to three minutes and two to five minutes. To be stopped suddenly without warning may be very embarrassing to a speaker, and on the front of the stand the manufacturers, the Goldsmiths' and Silversmiths' Company, Ltd., have placed a silver gong, which can be rung a minute before the expiration of the three or five minutes to warn the speaker that he is getting near the end of his allotted time. The time glass stand bears the following inscription:

PRESENTED BY THE BRIGHTON DIVISION TO THE REPRESENTATIVE MEETING OF THE BRITISH MEDICAL ASSOCIATION ON THE OCCASION OF THE 81ST ANNUAL MEETING OF THE ASSOCIATION HELD AT BRIGHTON, JULY, 1913.

W. AINSLIE HOLLIS, M.D., F.R.C.P.(Lond.),
*President.*

L. A. PARRY, M.D., F.R.C.S.Eng.,
*Hon. Local Secretary of Annual Meeting.*

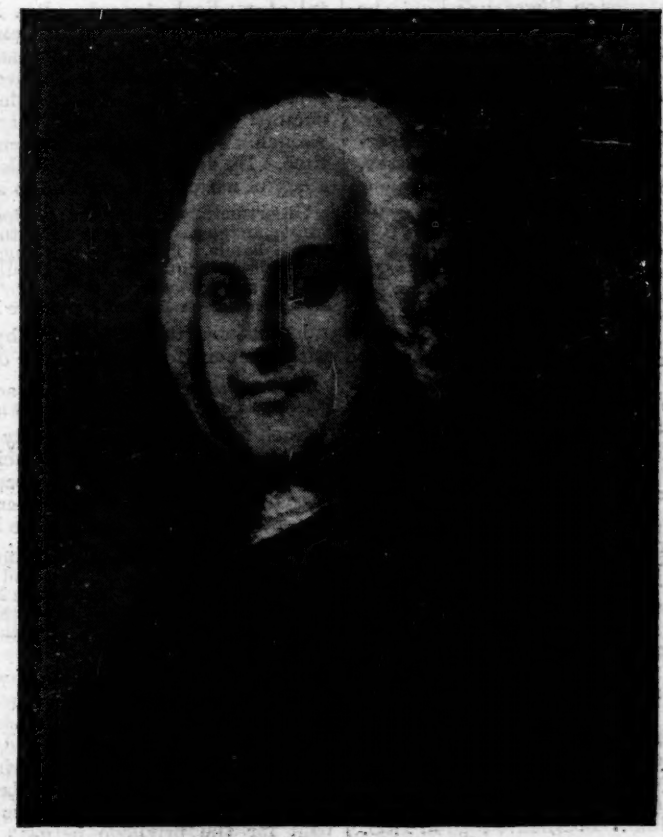
# Nova et Vetera.

## SOME FIGURES IN MEDICAL HISTORY.

### THEODORE TRONCHIN.

THERE have been many doctors who, without enriching the art of healing by the discovery of new truth, deserve a niche in the Temple of Medicine as reformers of practice. The "fashionable physician" is not always a man of whom his brethren have reason to be proud. But there have been men whose personality has had a kind of magnetic influence on patients, and who have thus been able to inspire them with the faith and hope which play a larger part than drugs in efficacious treatment. These men have possessed that mysterious power, now known as suggestion, which enables them to make sufferers obey them and co-operate with them in setting in motion the forces that make for cure. This has often made them more successful in dealing with disease, real or imaginary, than men of greater scientific knowledge. They understand the intimate relationship between the body and the mind, and the reaction of these upon each other. Their insight into human nature often leads them to seek for the cause of disease in mental states that are overlooked by the practitioner who trusts wholly to material methods of treatment. They work on minds unhinged by passion, worry, or fear, and exorcise the demon of disease not by pills or potions, but by inducing the sufferer to minister to himself. They do not seek to drive out disease by violent medicines which reduce the patient's strength, but help Nature to work the "miracle cure" by enjoining a mode of life in conformity with her ways. Fashionable physicians of this kind are almost invariably denounced by their own profession as quacks; and, indeed, the methods they employ to inspire confidence in the patient and bend his will to theirs not seldom have in them an element of charlatanism. This, however, is by no means incompatible with honesty. It is the same quality as the power of moving the enthusiasm of crowds or stimulating the devotion of armies, and is seen in most leaders of men whether in politics or war. The power of inspiring faith in himself is an indispensable part of the equipment of a successful healer. Falstaff says that learning is mere hoard of gold kept by a devil till sack sets it in act and use. The same thing may be said of medical knowledge which is not directed by a dominating or persuasive personality. Examples of the peculiar combination of qualities which go to the making of a successful doctor may be cited from every age. We need only mention among the ancients Asclepiades, the physician and friend of Cicero, Mark Antony, and other leading men in ancient Rome. In our own day there have been physicians of the most solid scientific worth who have known the stops of the human mind and been able to play on it as on a musical instrument.

An excellent example of the fashionable physician of the best type is Tronchin, whose name was famous throughout Europe in the eighteenth century, and whose consulting room was thronged by people of the day most distinguished not merely in rank but in intellect and artistry, as if it had been a veritable shrine of healing.* He was born in 1709 at Geneva of a Provençal family, which sought refuge in Switzerland from religious persecution in the sixteenth century. From that time onwards the Tronchins played a great part in the public life of Geneva, so that the future physician began life with great advantages. He received his classical education at Geneva. His father intended him to be a clergyman, but he had little taste for theology. In fact, for some time he was more fond of dancing than of study. He would go at night several leagues on foot unknown to his parents to enjoy a ball. A serious illness which brought him to the verge of the grave turned his mind to serious things, and he resolved to give himself to work. To this change a financial disaster which overtook his father, who was ruined in the Law crash, doubtless also contributed. Young Tronchin was sent to England in the hope that Lord Bolingbroke, who was a distant family connexion, might help him to make his way. The time was badly chosen for this purpose, as Bolingbroke was out of favour at Court and was kept aloof from power by his enemies. He lived retired at Dawley, in Middlesex, seeking consolation for the disenchantments of politics in letters and agriculture. He received young Tronchin with the most cordial hospitality, and in his house the young Genevan was brought into touch with Pope and Swift. But while recognizing the intellectual advantage of such acquaintances, the canny Swiss soon saw that he could gain little from a statesman in disgrace. On the advice of Pope he went to Cambridge, where he was admitted to the intimacy of Bentley. After a year of study under that great scholar he chose medicine as a profession, and attended the London hospitals for some months. He then went to Leyden to work under Boerhaave. During his stay in London he had the good fortune to become acquainted with Mead, who took an interest in him. To a question how he had come to acquire so brilliant a reputation, the physician, of whom Johnson said that he lived more in the broad sunshine of life than almost any man, replied in words which remained engraved on Tronchin's memory, "I have done little good, but I have been careful not to do harm."



THEODORE TRONCHIN
1709-1781

In 1728 Tronchin left England for Holland, where he had relations in important positions, by whom he was certain of being well received. At that time Holland was the resort of many students from England, Scotland, Switzerland, France, and Germany. No country could boast so many renowned professors, and Leyden particularly was in its glory. Boerhaave occupied the Chairs of Medicine, Botany, and Chemistry. One of those giants of

* This account is based mainly on a work entitled *Théodore Tronchin (1709-1781) d'après des documents inédits.* By Henry Tronchin. Paris: Librairie Plon. Plon-Nourrit, et Cie., Imprimeurs-Editeurs, 8, rue Garancière—6e Genève, Librairie Kundig. Librairie de l'Institut, 11, Corraterie. 1906. The portrait is reproduced from that book. It is from a pastel by Liotard.

encyclopaedic learning whom the specialization of knowledge rendered necessary by the enormous enlargement of its boundaries has now made as extinct as the mastodon, he was almost a medical faculty in himself. So great was his celebrity that he is said to have received a letter from a Chinese Mandarin addressed simply to "M. Boerhaave, physician in Europe." Albinus was Professor of Anatomy at Leyden at the time, and S'gravesande held the Chair of Mathematics and Astronomy. Tronchin had been recommended to him by two Genevan scientists, and he took the young student into his house as a boarder. Other recommendations were not so fortunate. Bentley had given him a letter to Burmann, the professor of Greek. These *viri illustrissimi* were in almost ceaseless controversy, and the Dutchman's reception of the English scholar's letter was rather alarming. He threw it angrily on his desk and went to get a stick. Tronchin rushed out of the house and told S'gravesande that Burmann had gone mad. It turned out that the letter was not a recommendation, but a furious invective against Burmann because in his commentaries on *Phaedrus's Fables* he had ventured to criticize Bentley's remarks thereon. Such were the amenities of scholarship in those days. Of course, disputes over particles must seem very foolish to scientific men of the present day, whose controversial style is always courteous and dignified.

In 1728 Tronchin began to attend the lectures of Boerhaave. The young man with his handsome countenance, graceful figure, and intelligent face, crowned by an abundance of hair dressed in rather dandified fashion, soon attracted the notice of the master. Boerhaave was overheard to remark that so fine a head of hair must cause a great loss of time. On hearing this Tronchin forthwith submitted his flowing locks to the shearer. This quickness to take a hint gave the professor a good idea of his aptitude for learning, and Tronchin soon became his favourite pupil. The young Genevan took his doctor's degree on August 22nd, 1730, when he was barely 21. He became a citizen of Amsterdam in the following October, and in the same month was inscribed as a doctor in medicine in the college of that city. He says with evident complacency that only three years had elapsed between the moment when he first thought of medicine and his graduation. Students at the present day who read these things must be inclined to envy the short and easy way in which our predecessors were admitted *in nostro docto corpore*. On the advice of Boerhaave he settled at Amsterdam, which at that time was afflicted by an epidemic of colica Pictonum. Tronchin as a young man and a foreigner did not inspire much confidence, and he became so much discouraged that he thought of returning to England; but he knew that the protection of Boerhaave, invaluable in Holland, would be of little use in England. His master, who had great confidence in the judgement and medical capacity of his disciple, helped him through his troubles, and befriended him in every way. He told patients that Tronchin was "his other self," so that they need not come to Leyden to consult him. Boerhaave died in 1738. He seems to have tried to induce his pupil to settle at Leyden and to get him appointed his successor in some of his multifarious university offices. But Tronchin did not leave Amsterdam. He was named inspector, and afterwards president of the college of physicians of that town. His reputation extended beyond the limits of Holland. At 30 he was regarded as the worthy successor of Boerhaave, and even celebrated doctors sought his advice.

In 1740 Tronchin married Helena de Witt, not, as often said, a descendant of the famous John de Witt, but a member of an Amsterdam family of good standing. The union was very happy, although the lady seems to have been plain, and, if contemporary gossip is to be believed, of somewhat trying temper. In 1753, as Holland appeared to him to be decaying, both in political power and in morality, he sent his two sons to continue their education in Geneva. In the summer of 1754 he himself left the country in which he had passed twenty-five years of his life and returned to Switzerland. So suddenly was the decision taken that he arrived in his native country with only a dozen shirts and the clothes he had on. The reasons for this flight (as he himself calls it) are obscure. It cannot be that he had fallen out of favour, for he was invited to become the first physician to the young Stadtholder, William V, then 3 years of age. Tempting offers were also made to him by the Empress of Russia. But he determined to stay at Geneva, where he was welcomed by the magistrates, the Academy, the clergy, and even the doctors. It was proposed to re-establish for the "illustrious disciple of Boerhaave" a chair of medicine founded by Theodore Beza in 1567, but almost immediately suppressed for lack of funds. The Council agreed to confer on Tronchin the title, rank, and honours of honorary professor. On the other hand, the medical faculty expressed its resentment at this nomination, which was made behind its back, by adjourning Tronchin's admission indefinitely under various pretexts. At last a low room in a private house was offered by a friend of the Tronchin family. There Tronchin delivered lectures, sometimes in French, sometimes in Latin, and continued them till 1766, when he finally removed to Paris. He confined himself to the generalities of medicine and physical and moral hygiene. His ever-increasing practice and frequent sojournings abroad undoubtedly prevented his devoting himself entirely to the instruction of a handful of medical students. But his professional celebrity, the clearness of his expression, and the novelty of his theories, attracted an enthusiastic lay audience. Voltaire was sometimes among his hearers. Applauded by philosophers, says Condorcet, the lectures were criticized by doctors. This is hardly surprising when one knows Tronchin's views on the medicine and practitioners of his time. He urged that the foundation of medicine was the study of nature, but went on to say:

> Unfortunately the errors of doctors, their laziness, their vanity, make and will ever make this work too heavy for their feeble hands. There are less rugged paths along which one can walk without having a firm step and a sinewy calf. And thus it is that medicine, it is sad to say, is likely to remain as it always has been the scourge of the human race.

He insisted that the wise physician contented himself with removing obstacles to the operation of Nature.

> He checks her when she is too active, excites her when she goes to sleep. But it is she only who cures.

Such opinions were not likely to make a man popular with his brethren. His denunciations were so sweeping that he admitted only a few exceptions, and he made no secret of his contempt for other practitioners. He went so far as to write to Sauvage de la Croix, in 1766:

> It would be better, taking all things into account, that there should be no doctors. . . . It would be better that the lives of men should be entrusted to boon Nature, whose resources are infinite. The proof of this is all that she has done to preserve the life of men, notwithstanding the foolishness and errors of doctors.

He constantly deplores the unworthiness of his brethren, especially condemning the eagerness for gain shown by most of them; and it may be admitted that at that time medicine was too often practised by men whose chief aim was the making of money. Grimm in 1771 relates that the all-powerful Senac, physician to Louis XV, was the king of quacks; he allowed his wife to give to all who paid for the privilege permits to sell throughout the kingdom drugs often mischievous to the health of the people.

Tronchin was an ardent advocate of inoculation, which he introduced into Holland in 1748, and into Switzerland, where he had made a short stay, in 1749. He devoted himself to the diffusion of this means of mitigating the ravages of small-pox and to the overcoming of opposition on the part of the medical profession and the clergy. He improved the procedure, and was called by Grimm the most fortunate inoculator in Europe. He had powerful allies in Voltaire and La Condamine. But while steady progress was made in other countries, France refused to accept the method. When in 1756 the Duke of Orleans invited Tronchin to inoculate his children there was a general outcry. He made a mystery of his journey to Paris for the purpose, and when it became known that he had inoculated the Duke of Chartres the whole of Paris kept its eyes fixed on the Palais Royal for three weeks, awaiting the issue with feverish anxiety. When the success of the experiment was officially made public, opinion changed and inoculation and the inoculator became the fashion. Women wore "inoculation bonnets," the ribbons of which were ornamented with imitations of small-pox pustules, and a large trade was done in "Tronchin's vinegar," described as a wonderful preserva-

tive against pestilential diseases. The Genevan doctor's dwelling was besieged by crowds seeking counsel of the new oracle, to such an extent that the street in which he lived became impassable. On leaving Paris he received from the Duke of Orleans a fee of 50,000 livres, besides gold snuffboxes and jewels. He must also have carried away with him a rich booty of fees. A contemporary writer, the Duc de Luynes, quotes Tronchin as stating that during his stay in Paris he had inoculated 20,000 persons without a single death.

His prodigious vogue in Paris made his name famous throughout Europe. He was the recognized authority on inoculation, and crowned heads and great nobles sent doctors to Geneva to be instructed by him. A triumph that must have been specially gratifying to him, as inoculation had been opposed with particular bitterness in Italy, was his successful inoculation of Prince Ferdinand of Parma. In 1774 Louis XVI, soon after he came to the throne, was successfully inoculated, together with his brothers. Nevertheless the battle among the doctors still raged, and did not finally end till the introduction of vaccination made the question obsolete.

Tronchin made of Geneva a place to which pilgrims in search of health went from all parts of Europe. Voltaire compares him to Aesculapius and his house to the celebrated temple of Epidauros. Thither flocked great ladies, ministers, ambassadors, generals, magistrates, writers, and actresses. Nearly all the best-known people of France, among them royal personages, the greatest nobles, cardinals, archbishops, and philosophers, were his patients. People lived for months under his eye and filled the inns and lodging-houses of Geneva and the villas in its neighbourhood, to be near him. An English colony, comprising the leaders of fashion, dwelt in the dull little Swiss town under his wing. When he left Geneva the group of devotees who had gathered about the shrine dispersed. Voltaire was his near neighbour, and while scoffing at doctors called in Tronchin for the slightest indisposition. To the physician he also looked for protection in the many troubles which his meddling with the affairs of the Swiss Republic and his unscrupulous pamphleteering brought about his head. He flattered Tronchin in the most fulsome way, but the doctor was not in the least intoxicated by his incense nor deceived as to his character. Relations between them became strained in consequence, though Voltaire never hesitated to ask favours of the doctor. During his last visit to Paris he called in Tronchin, who wished him to go back to Ferney and remain quiet. This advice was not followed, and the terrors of Voltaire's deathbed made a deep impression on the physician's mind. Tronchin was also at one time on intimate terms with Jean Jacques Rousseau, and, like every other person who had the misfortune to be a friend of the "citizen of Geneva," came to be regarded by him as one of those who conspired against his peace. He called the physician "the juggler," and described him as his most mortal enemy. Him, too, Tronchin knew well, and he deliberately expressed the opinion that he was an infamous scoundrel and an enemy of his country and of mankind.

Wearied by the war of political and religious factions at Geneva, Tronchin settled in Paris in 1766. The Duke of Orleans welcomed him with open arms, and appointed him his physician. As before, he was the object of systematic hostility on the part of the doctors, who used every artifice to undermine his reputation. But Tronchin went his way secure in the esteem of the Court and the intelligent public. Though fashionable people still crowded to him for his advice, he stood aside from the social dissipations then carried almost to the pitch of frenzy, foreseeing like so many other observers the catastrophe of the Revolution, and looking on at the follies in which he took no part as at a wild dance on the edge of a volcano. He did not live to witness the upheaval, dying in the Palais Royal on November 30th, 1781, in the 72nd year of his age. The Duke of Orleans mourned for him as for a brother and he was followed to the grave by crowds of poor people. This was a testimony to his charity; he not only saw poor patients on certain days without a fee, but gave them money to buy the remedies which he ordered. This generosity prevented his acquiring a large fortune.

Tronchin was satirically but not altogether untruly described by one of his brethren as a skilful doctor for fashionable people, and a perfect man of the world in the eyes of doctors. While maintaining the closest relations with men who were tearing up the roots of old beliefs, he lived and died firm in his religious convictions. He was a man of high principle, with a deep sense of the dignity and responsibility of his profession. With this he combined a large fund of shrewd common sense; this, together with a gift of keen observation, made him the successful practitioner he undoubtedly was. Though his manner was sympathetic and conciliatory he was firm in handling the sceptical and self-indulgent people who asked his advice, and he told them the truth about their mode of life in the plainest language. His success was no doubt aided by his fine presence. He was six feet high, and Voltaire, who called him Apollo, thus describes his appearance:

> Sur son beau front siège le doux repos,
> Son nez romain dès l'abord en impose,
> Ses yeux sont noirs, ses lèvres sont de rose.

The charm of his conversation made him very acceptable as a companion, and Voltaire said no one spoke better or had more wit. He had subtlety of thought, grace of expression, and quickness of repartee. But this gently playful tone could become masterful, and his jesting smile hid a will that was accustomed to be obeyed. His professional correspondence was immense. Sovereigns and rulers wrote to him from nearly all parts for advice as to their own health and that of their children. Pope Clement XIV sent him a letter of thanks for his successful treatment of Cardinal Colonna. Tronchin wrote only one book, a Latin treatise on the colica Pictonum, and this was produced in response to pressure by friends. It was published at Geneva in 1757. The subject was opportunely chosen, as the most diverse views were held as to its cause. Tronchin deserves credit for recognizing that the colics of Poitou were often caused by lead which was added to wine by some manufacturers to sweeten it and give it colour. But the work after all was little more than a compilation, although the celebrity of his name made it known throughout Europe, and he received congratulations on it from such men as Van Swieten and Quesnay. There were, however, many critics, in particular Bouvart, a Paris physician with a bitter pen who had given especial attention to the disease. Tronchin refused to write more, pleading want of time. He could hardly deal with his correspondence, and he was satisfied with having wrought in Paris a revolution in medicine for which people were grateful. Although he had many bitter enemies among the doctors, he had also not a few friends. He was a member of the College of Physicians of Montpellier, of the Paris Academy of Surgery, a foreign Associate of the Academies of Science of Berlin, Paris, Edinburgh, Stockholm and St. Petersburg, and a Fellow of the Royal Society of London.

Tronchin did not seek for his theories in books; he was before all an observer. Grimm exactly characterized him in a few words when he said, "Never did physician more consult Nature or seize with more sagacity all its movements and indications." Tronchin himself deplored what he calls the fatal activity of his brethren. He held that it was often the height of wisdom to do nothing. He was an eclectic and denounced all sects and systems. In his time violent purges, bleeding, and emetics formed the basis of therapeutics. Even in slight diseases these drastic methods were employed, and they were generally demanded by the patient. Against bleeding Tronchin was particularly vehement. He was accustomed to say that the number of specifics diminished in proportion as wisdom increased. The remedies he prescribed were always simple. He seems to have had a special predilection for soap pills. Among his French patients he had many courtiers suffering from the excesses of the Regency. To tell such people to be prudent, to order the number of hours they should sleep, and to regulate their meals and manner of life would have been useless. In such cases the adroit physician reduced the prescription apparently to a simple injunction to take three pills (Tronchin's) every day, with the instruction:

> N.B.—It is essential that these should be taken as follows: The first at seven in the morning on getting up; the second at five in the afternoon, after a moderate repast; the third at nine o'clock on going to bed.

This method was successful, and the pills, which contained

nothing more potent than *mica panis*, worked wonders. The novel point about Tronchin's practice was hygiene, which was then almost completely neglected. Diet, pure air, exercise, life in the country, friction with dry flannel or a flesh brush, and above all movement by whatever manner it might be obtained, were his favourite prescriptions. Like Sydenham he believed in riding, and often ordered horse exercise. He would order an abbé suffering from headache to saw his own wood, and great ladies to sweep out their rooms and make their beds. Thirty years before the Revolution he persuaded women of quality to take morning walks. This became fashionable, and short dresses without panniers were invented, and got the name of Tronchines. The word *Tronchiner* became common among fine folk. It expressed the action of walking in flat-soled shoes with a stick in the hand for the sake of health. He was particular as to the hygiene of literary people. He held that intellectual work should begin with sunrise and be continued till noon. Work at the desk should be done standing; in a long letter to Diderot he lays stress on the organic troubles which result from sitting bent forward. Hence desks *à la Tronchin* became fashionable. It may be remembered that Victor Hugo always worked in the standing position. Tronchin allowed seven hours for sleep. He denounced the overfurnishing of rooms and living in a vitiated atmosphere. He insisted that the windows of Versailles, which by custom were hermetically sealed from the end of November till Easter, should be thrown open, and he called the attention of Louis XV to the dangers caused by the stagnant waters of the grand canal. He advised the substitution of a hair pillow for the heap of feather cushions at that time in use and to sleep with the bed curtains thrown open and the head covered as little as possible. He warred against cravats, too warm headdresses, and too tight skirt bands. Against nightcaps and wigs he was particularly vehement. Diet played a chief part in Tronchin's prescriptions; he was always warning his patients against overeating. Sometimes he prescribed a vegetarian diet and he recognized the benefit of a milk diet. He regarded plain water as the wholesomest of drinks. But he drew a distinction between use and abuse in regard to wine, which taken in small quantities and diluted he regarded as an excellent tonic and digestive. He tolerated beer but strictly forbade strong drinks. Spirits were in his eyes a "cutting instrument that one uses in the dark." But whatever the drink might be, it was always to be taken cold. He condemned hot infusions, then considered wholesome, as harmful to the digestion and consequently the general strength. Tea and coffee he looked upon with special disfavour, saying that since the use of these hot drinks had become general new diseases of nervous type had arisen. He thought they weakened the human race. For the same reason he condemned hot baths. He recommended gymnastics, riding, and fencing to young men; he exhorted parents to give their children a less effeminate education. He laid the strongest stress on suckling by mothers, and he went into the minutest details as to the hygiene of newborn babes, especially condemning the practice of drugging them, and forbade the practice of wrapping them in swaddling clothes. He is entitled to honour as an innovator in certain fields of practice. In 1756, having been called to the little Duke of Chartres, who had a spinal curvature, he employed with complete success the method of suspension which was not to come into use till 150 years later. He cured an ecclesiastical dignitary of what seems to have been facial neuralgia by division of one or more branches of the trigeminal nerve.

From Tronchin Rousseau learnt the details of the hygiene of childhood preached in his *Emile*. From him, too, Jean Jacques learnt his enthusiasm for free play in the open air, and his aversion for a sedentary life. Rousseau, being a man of systems, carried this one to excess. Tronchin, more enlightened, did not ask that children should be brought up in the Spartan manner, or that they should be allowed to run about in all weathers to harden them, or that they should sleep in damp places, and drink iced water when they were perspiring.

In the second half of the eighteenth century there was an immense trade in quack remedies and pretended specifics for the nervous troubles so common among women at that time. Tronchin, by a combination of hygiene and moral medicine, introduced a real reaction in the treatment of neuroses which became his speciality. His profound conviction of the intimate connexion between the soul and the body led him to use largely methods that would now be called psycho-therapeutic. He blames the doctors of his time for not seeing that it is often the spirit rather than the body that is diseased, and that the use of purging, emetics, and bleeding only makes matters worse. If they knew, he says, how to make use of psychology they would often cure diseases that seem incurable. Of course the body requires some treatment, but they should always begin with the spirit. Perhaps it may be said that he to some extent abused his spiritual medicine, although he recognized how difficult and delicate a thing it was to handle. In a pregnant sentence he says that it is not enough to know the evil and the remedy for it; one must be able to get the remedy used. He knew what could be done by persuasion, aided by the effect of his presence. His secret is revealed in the following statement:

> I know doctors to whom there is only lacking the art of inspiring this confidence to be successful.

He himself recognized that his vogue was more artificial than deserved, and was under no illusion as to the efficacy of his treatment in many conditions. He admitted that the doctors of Paris rightly reproached him with seeing too many patients, but pleads that he could not help this. "If any one," he said, "professes to regard too large a practice as criminal, I venture to say it is myself. One does not see diseases when one sees too many patients."

Tronchin was almost an international power in his day. He was a fashionable physician in the largest and best sense. Probably no doctor has ever held such a position in the eyes of the great world. His campaign of small-pox inoculation made him known, but we must seek elsewhere for the causes of his celebrity. At a time when medicine had not yet freed itself from the shackles of authority he contented himself with observing nature and letting it work. This is the fundamental principle of his method. There was little new in his treatment; it was the moral force of his personality made him great.

## LITERARY NOTES.

Dr. Balkrishna Sharma of Delhi has recently translated Dr. S. Adolphus Knopf's international prize essay on tuberculosis. Tuberculosis is very prevalent in India, and the Hindi language is spoken by more than eighty million people; Dr. Balkrishna Sharma has therefore done well to translate for the benefit of his country a book primarily intended for the education of the public. A new issue of the seventh American edition of Dr. Knopf's work has just appeared. Since the publication of the original first edition in 1900, thirty-six different editions in various languages spoken in Europe, America, and Asia have appeared, including the Hindi version above referred to and the recently issued French-Canadian translation.

The *British Review* for July has a varied and interesting table of contents. None of the articles, however, has any particular relation to medicine. Among the most interesting is "The Conversion of the Celt," by Shane Leslie. Katharine Tynan contributes a pretty story entitled "An Irish Morning," and there is a charming poem, "The Girl and the Faun," by Mr. Eden Phillpotts. We congratulate the editor, Mr. Richard Johnson Walker, on the excellence of his choice of literary material and on the manner in which it is produced.

In a story entitled "Holloway's Corot," which appears in the July number of the *Strand Magazine*, Mr. Morley Roberts introduces a doctor who is called to a child on the verge of suffocation from diphtheria. When told by the nurse that the attack had come on half an hour before, he makes the extraordinary reflection:

> Yes, she was a bad nurse—there were tears in her eyes. By now a good nurse with her wits about her would have done a tracheotomy on the boy, even if she had had to do it with a penknife.

Mr. Morley Roberts knows more of surgery than the average writer of stories, which makes this judgement of a nurse's capabilities all the more extraordinary. The

modern nurse has already quite enough responsibility to bear; if she is expected to do tracheotomy with a penknife her position will become impossible. Popular writers owe a duty to the public in regard to medical matters, for readers may be seriously misled by inaccurate descriptions. We remember that a few years ago there was an account of a case of diphtheria in a monthly magazine of the highest class where the hero was said to have deliberately sacrificed his life by sucking the poisonous matter from the little patient's throat through a quill introduced by the mouth!

Robert Bridges, M.B.Oxford, F.R.C P., formerly casualty physician at St. Bartholomew's and assistant physician at the Children's Hospital, Great Ormond Street, who has just been appointed Poet Laureate, has written an interesting and amusing booklet on the present state of English pronunciation. He shows from a table of phonetic transcriptions of the actual pronunciation even of educated people, by Daniel Jones, issued by the University Press at Oxford, how the vowel sounds have become altered. For instance, "of" into "erv," "and" into "ernd," "from" into "frerm," and "to" into "ter," and so forth. In illustration of this he tells the following story:

My friend, the late Dr. Gee, going his round of the hospital wards one day, came to the bedside of a newly admitted patient. After examining him carefully, and finding little the matter with him, he called for the bed-card, and in his deliberate manner prescribed thereon a diet with a *placebo* to be taken three times a day. The man, frightened by his gravity and his silence, feared the worst (he may perhaps have been reading Mr. Stephen Coleridge's letters in the newspapers), and was no sooner left alone than he snatched down the board, and, seeing cabalistic signs, and at the foot of them the awful words *ter die*, and reading them, this learned man, with much the same kind of pronunciation as the Public Orator will use at Oxford, he saw as he thought his death warrant: so he whipped out of bed, and fled for his life; to add, no doubt, a new tale to the *terrers* of the hospital.

Mr. Bridges says that any one who thinks his own speech above reproach should at once examine it; if he cannot trust his own ear, let him ask a friend to note what sounds he really utters when he talks. He thinks the person thus tested may congratulate himself if he does not pronounce more than 70 per cent. of his words in the way that has been indicated. The remedy, he says, is to spell as we pronounce, the standard being fixed as we judge words should be pronounced, "not as we foresee or guess they are coming to be pronounced in the normal process of unimpeded degradation." Another help suggested is that school boys should no longer be taught to pronounce Latin as English.

In the May number of the *Canadian Medical Association Journal*, Dr. R. D. Rudolf, of Toronto, quotes a case which he describes as the earliest one in which appendicitis was distinctly recognized. The first account of the condition is usually assigned to Mestivier, who in 1759 reported the case of a man who had a fluctuating tumour in the umbilical region on the right side; about a pint of pus was withdrawn by incision, the wound healed rapidly, but the patient died shortly afterwards. After death a large pin, very rusty and so corroded that the least touch would have broken it, was found in the appendix. It evidently had been there a long time, and Mestivier had no doubt that it had given rise to all the symptoms, and finally caused death. Dr. Rudolf, however, calls attention to a more typical case, not caused by a foreign body, which is reported in Lorenz Heister's *Cases in Surgery*. An account of Heister was given in the JOURNAL of July 12th, p. 80. The report is as follows:

In the month of November, 1711, as I was dissecting the body of a malefactor in the public theatre at Altdorff, I found the small guts very red and inflamed in several places in so much that the smallest vessels were as beautifully filled with blood as if they had been injected with red wax in the most skilful manner after Ruysch's method. But when I was about to demonstrate the situation of the great guts, I found the vermiform process of the caecum preternaturally black, adhering closer to the peritoneum than usual. As I now was about to separate it by gently pulling it asunder the membranes of this process broke notwithstanding the body was quite fresh and discharged two or three spoonfuls of matter. This instance may stand as a proof of the possibility of inflammations arising and abscesses forming in the appendicular as well as in other parts of the body, which I have not observed to have been much noticed by other writers, and when in practice we meet with a burning and pain where this part is situated we ought to give attention to it. It is probable that this person might have had some pain in this part, but of this I could get no information.

Heister thought such a condition should be treated by clysters prepared with emollient and discutient herbs, such as mallows, marsh mallows, and camomile flowers, and the like remedies against inflammations, boiled in milk, and used frequently, because, he says, they reach the part, and may resolve the inflammation or bring the abscess to a suppuration, partly by their warmth, partly by their resolving and discutient qualities, opening the abscess that the matter may be discharged by stool. When the parts in the abdomen have become "corroded" death must follow.

Edmund Burke married the daughter of a Dr. Nugent, a physician at Bath. Nugent eventually took up his residence with his son-in-law in London, and became a popular member of that famous group of men of letters and artists whom Boswell has made familiar to all later generations. A member of that society was an eminent attorney called Hickey, whose name is commemorated in Goldsmith's poem, Retaliation, in the lines beginning:

> Here Hickey reclines, a most blunt pleasant creature,
> And slander itself must allow him good nature;
> He cherished his friend and he relished a bumper—

and so forth. He had a graceless son named William, whose memoirs (1749–75), edited by Alfred Spencer, have recently been published by Messrs. Hurst and Blackett. He says that Nugent was an intimate friend of his family, every member of which looked upon him with gratitude as having saved his father's life. As the method of treatment was a somewhat curious one, it may not be out of place to quote it. A few years after his marriage the elder Hickey became seriously indisposed, lost his spirits and his appetite, becoming steadily weaker and weaker:

The medical gentlemen, long at a loss to give a name to his disorder, after drenching him in vain with physic pronounced him to be in a deep decline. He was therefore put upon a vegetable diet, forbid the use of wine and strong liquors, and according to the then and still prevailing system, when the London doctors know not what to do, was, as a forlorn hope, ordered to Bristol. To the hot wells he accordingly went, where he was gradually and fast sinking to the grave, when fortunately for him Dr. Nugent arrived. They had been at Dublin College together, and there formed a friendship of the warmest nature. This was their first meeting since leaving the university. The doctor expressed great concern at seeing his fellow collegian in so reduced a state. He inquired into the particulars of his case and the manner in which the medical man had treated him. After having satisfied himself on these points, he said, "Well, Joe, we must now try what can be done for you here, and I by no means consider your case a desperate one. I shall come and dine with you, when we will talk further upon the subject, so order a nice small sirloin of beef to be roasted, and, I scarcely need add, a bottle of good claret." The order being obeyed and dinner served, the friends sat down, my father having his miserable basin of gruel placed before him, of which, however, he scarcely swallowed a spoonful. Dr. Nugent helped himself liberally to the roast beef, which he pronounced excellent, and admirably dressed. After eating some time he asked my father whether the smell of the victuals oppressed or was disagreeable to him, to which he answered, "By no means; quite the reverse, the savour of the meat is pleasant to me." "Why, then," continued the Doctor, "perhaps you'd like to have a slice." My father, who concluded he was not serious, replied, "That is not fair, Doctor, to tantalize me when I am sure I could eat a pound of it." "Say you so, Joe," said the Doctor, "then by Jove you shall have a good slice, though not a pound," and he immediately cut him a tolerable sized bit. My father, in utter astonishment, could hardly believe his sight or hearing; he, however, devoured the beef with infinite glee. "And now," said the Doctor, "probably you would like to wash down the meat with a glass of claret," accompanying his speech by pouring out a couple of bumpers, one of which my father swallowed with equal surprise and pleasure. "And how do you feel after that?" inquired the Doctor. "Quite a new man," answered the patient, "and ready for a second edition." But to that the Doctor gravely said: "No, no, you have done very well for a beginning, and must now be content to see me eat and drink, but to-morrow morning I shall call early, and if I find you as well as I expect and hope for, you shall at four o'clock not only repeat the dose, but increase the quantity."

The patient, after a better night's rest than he had had for many months, rose wonderfully refreshed, took two slices of beef and two bumpers of claret the second day, threw physic to the dogs, and from that time to the day of his death, which occurred more than half a century later, never knew a day's illness

British Medical Journal.

SATURDAY, JULY 19th, 1913.

## THE AMENDING INSURANCE BILL.

The debate on the Insurance Act Amendment Bill in the House of Commons on Tuesday, though short, was highly instructive, and will well repay careful study by medical practitioners whether they are or are not working, willingly or unwillingly, under the Insurance Act. It is reported in the Supplement, p. 92.

The very confident prophecies of a year ago, that by the anniversary of the Insurance Act coming into force the scheme would have become popular, have not been fulfilled. The Act is not really popular with any class, and it is extremely unpopular with some. Mr. Lloyd George comforts himself by saying that this was to be expected, and that the unpopularity will eventually pass away—in two or three years or so.

But if the Act and its administration are unpopular in the constituencies, this is an attitude of mind which cannot be neglected by the House of Commons. We say the House of Commons rather than the Government advisedly, because when dissatisfaction with domestic legislation which, as in this instance, affects all classes, is widespread, it becomes a matter of direct personal concern to every member of Parliament who must ask himself what is the state of opinion in his own constituency. He is not content in such a case merely to register his leaders' decisions; on the contrary, the results of his inquiries and cogitation quickly find their way to the party whips. Under the party system of government advantage is taken of any indication of a distinct current of opinion, not only by the leaders but by those who seek to influence them and play off one party against another. The activity recently displayed by the officials of some of the friendly societies in demanding "the restoration to them of the right to administer medical benefit" is evidently due to the belief that the unpopularity of the insurance scheme in many quarters may be utilized to win over one or other party to their views. There is evidence that the Unionist party organization has been considering the question whether it would not be a good tactical move to side with the dissatisfied officials of the friendly societies and promise if the party comes into power to put the control of medical benefit in the hands of the societies; there is concrete evidence of this in the amendment of which Mr. G. Locker-Lampson has given notice, to transfer under certain not onerous conditions the administration of medical benefit to approved societies (Supplement, p. 96). The demand is made on the ground that the drain on the funds of the societies has proved to be greater than was estimated, owing partly, as is alleged, to the great cost of administration and partly or chiefly to the claims for sickness benefit being greatly in excess of such experience as the societies previously had. The debate on Tuesday will have gone a long way to knock the bottom out of all this. It is true that Mr. Masterman, who, if not conciliatory, is usually almost painfully logical, did not on this occasion display that quality. He alleged that the increase in the amount of sickness disbursements during the second quarter was due to the fact, which he admitted had not been explained, that there had been an unusual amount of genuine illness; he asserted that the increase was not general, and that the sickness experience in some of the largest societies had not come up to the amount allowed for in the actuarial estimates; and, finally assuming that there was a general excess, he attributed it to the laxity of the medical profession in giving certificates or to their being given with the deliberate intention to wreck the Act. These insinuations were repelled from his own side of the House by Dr. Addison and from the other by Sir Henry Craik, who spoke with justifiable indignation; it was repelled also by members of the Labour Party, and will, it may be expected, find its quietus as the result of the inquiry by the committee of representatives of the approved societies and of the medical profession which is to be set up, and is to sit during the autumn and winter.

We have no doubt that it will be shown that the increased demand for sickness benefit, to whatever extent it may really have been experienced, is in the main due to the bringing into medical benefit by the friendly societies of millions of persons who had been previously rejected by the societies as unsound or who had not sought to make any voluntary provision. That these two circumstances, and the second in particular, must have had a great effect appears to be shown by the very high sickness-rates among women, especially in some areas—a point which Dr. Addison, a professed friend of the insurance scheme, brought out very clearly.

The constitution of this committee of inquiry is a matter to which the British Medical Association must give attention, and the subject will no doubt be raised during the Annual Representative Meeting. It is one upon which the Association ought to be in a particularly favourable position to speak. But if it is to put forward the case of the profession effectively, and to combat the approved societies in the campaign against the doctors in which some of them appear anxious to engage, it must be able to speak in the name of the whole profession. Mr. Masterman did not resist the temptation to twit us on our divided counsels, alleging that we were divided into two classes—panel and non-panel—and that we were in a hopeless dilemma about contracting out. The sting in these taunts is that there is a measure of truth in them. After achieving so many valuable points by our union through the British Medical Association, we are in danger of showing to the nation a picture similar to that presented by the Balkan States, to the disgust and derision of Europe.

## DENTISTRY IN THE UNIVERSITY OF LONDON.

The report of the Royal Commission on University Education in London contains a section devoted to dental surgery, which is of especial interest because it records the considered opinion of Commissioners who came fresh to the subject and formed their conclusions upon the copious evidence submitted to

them. The only important step so far taken by the University of London is the establishment of the degree of Master in Dental Surgery. For this degree no one has yet presented himself, and, as a candidate must have taken the degrees of M.B., B.S., and then have undergone an extra year of study, finally passing an examination based on lines corresponding to those for the M.S., the conditions are so onerous that very few can ever be expected to attempt it.

The Commissioners look upon its establishment as a mistake; not only because for all practical purposes it fails to afford a university degree for dentists, and hence can have little or no influence upon dental education, but also because they doubt whether the full range of instruction in medicine and surgery which it involves is the scientific foundation most appropriate for the dental surgeon.

With regard to the institution of a first degree in dental surgery, they sound a rather uncertain note; their report, indeed, is open to the criticism that they first show reasons against it, and then go on to recommend it. Their real attitude appears to be that, whilst they consider that it would be unwise to set up for the majority of dentists a standard high enough to be proper for a university degree, such a degree should be open to the more ambitious student. In other words, they pronounce themselves in favour of two grades of purely dental qualification, one to be granted by the University, the other by the licensing bodies.

They suggest that the University ought to undertake the training for its degree, and they sketch out a course of education which does not materially differ from that now in vogue at the College of Surgeons. But they seem somewhat to have misapprehended the scope of the latter curriculum when they imply that in it the acquirement of manipulative skill has tended to oust scientific training, for precisely the opposite view has sometimes been expressed as a complaint against the College.

They suggest that the University should institute a qualifying degree of somewhat higher standard than existing licences, and that up to a certain point the curriculum should proceed upon the same lines as the medical curriculum. They advise that the University should undertake this training, but add that the provision need not at present be extensive, as they imagine that the course will be beyond the means of the majority of dental students. They add that the University should not enter into competition with the College of Surgeons by instituting a mere licence, a course which has been pursued by some of the provincial universities.

It is worth while to look into the grounds upon which these conclusions are based; they may be deduced partly from the evidence offered before the Commissioners and partly from their own statements. They would encourage the dental student, when possible, to take a degree in medicine and surgery, but they do not regard this as an essential precedent to a degree in dentistry, inasmuch as it cannot be maintained that the minimum accepted for a medical qualification does guarantee a scientific knowledge of the whole, and they remark that the medical curriculum "is directed at least as much to range of subjects as to thoroughness of scientific grounding." Here they touch upon an old and still unsettled controversy; some who have enjoyed good opportunities of judging think that the dental student who is able to go beyond the minimal dental qualification cannot do better than take a medical diploma, whilst others hold that there is room for a higher special dental diploma or degree, and it is evident that the Commissioners lean towards this latter view.

It is evident also that the Commissioners have been influenced by other than purely educational considerations, for they allude to the unsatisfactory state of the law, pointing out that so long as the law remains as weak as it is (and it has been further weakened by recent legal decisions) no higher standard can be required, whilst even if the law were strengthened by restrictive legislation it might become necessary to lower existing standards in order to secure a supply speedily. On this it might be remarked that the inadequacy of the law, by depreciating the prospects of the qualified dentist, greatly diminishes the supply of those seeking a qualification, and it is not an unknown thing for a student to go through his courses of instruction and then make no attempt to get a qualification.

The Commissioners remark that there are only about 3,150 qualified dentists as against, probably, from 25,000 to 35,000 unqualified practitioners. But these figures require some comment before conclusions can be drawn from them. There are about 5,100 names upon the *Dentists Register*, of whom more than 67 per cent. hold the diplomas of licensing bodies, whilst the remaining 33 per cent. were registered in virtue of having been in practice prior to 1878, and are, therefore, mostly of advanced age. The numbers upon the *Register* remain fairly constant, the losses by death being made up by the new entries of fully qualified persons. As the dentists registered as in practice before 1878 are in the eye of the law in the same position as those holding qualifications, and as the 3,150 is not only below the actual figure but represents a steadily increasing number, it is a little misleading. For the figure of 25,000 to 35,000 irregular practitioners there is little authority; so far as we know, it rests upon a mere guess, or perhaps upon the irresponsible statements of a body of unqualified practitioners, numbering, we believe, about 2,000.

Nevertheless, although the figures may be quite unreliable, there is no doubt that the number of irregular practitioners is very large, and it is believed to be rapidly increasing. Facts which have since come to light show that the 5,000 odd who registered about 1878 included not only all of the dentists of that date, but a good many who had very small claim to the title, and it may safely be assumed that at that date there were not materially more than 5,000 persons obtaining a living by the practice of dentistry. Since that time the population has increased, but the number of registered dentists has remained constant. And, although the number of students entering shows some increase of late years, so that the numbers may be more than kept up in the future, the rate of increase of qualified men is disappointing, and we have no doubt that the Commissioners are right in attributing this to the weakness of the law, which exposes them to unfair competition.

We welcome the report as acknowledging the claim of dental surgery to be recognized as a learned profession, and as advising the University to take it under its wing to an extent hitherto not contemplated; that the Commissioners have not felt themselves able to go further than they have is evidently due to their recognition of the difficulties which have already been mentioned and which have their root in the unsatisfactory state of the law.

## THE SECOND INTERNATIONAL OPIUM CONFERENCE.

IN accordance with Article 23 of the International Opium Convention, which was drawn up and signed by twelve Powers in January, 1912, a further Conference was held at the Hague from July 1st to 9th. The object of this Conference, to which all the Powers who in the intervening eighteen months had signed the original Convention were invited by the Netherlands Government, was primarily to consider the possibility of proceeding to the ratification of the Convention, notwithstanding the fact that some dozen Powers had for various reasons or no reason either omitted or refused to sign.

It will be remembered that the object of the Convention was to institute stringent international control over the preparation, sale, import and export, of opium, morphine, cocaine, and certain other drugs liable to similar abuse. At the opening sitting of this Conference, which took place in the Hall of Knights in the old Binnenhof Palace at the Hague on the afternoon of July 1st, twenty-four nations were represented, namely, Germany, United States, Argentine, Belgium, Brazil, Chili, China, Columbia, Costa Rica, Denmark, Dominica, Ecuador, Spain, France, Great Britain, Haiti, Italy, Japan, Luxemburg, Mexico, Netherlands, Portugal, Russia, and Siam. The chair was taken by Jonkheer de Marces van Swinderen, the Dutch Minister for Foreign Affairs, who in the name of Queen Wilhelmina welcomed the assembled delegates. M. Cremer, the first Dutch delegate, was elected Chairman of the Conference, and a Secretariat was appointed. Some discussion was raised by Dr. Hamilton Wright, the first American delegate, as to procedure and the arrangement of the programme, but Sir William Collins, who with Mr. Max Müller was plenipotentiary for Great Britain, urged that the main work of the Conference was confined to proceeding under Article 23 of the Convention to consider the question of ratification, and remove obstacles in the way thereof.

On July 2nd, at the second session, a resolution was handed in on behalf of the German, British, French, American, Dutch, and Russian delegations, dealing with the main question of ratification of the Convention. It appeared that, of the 34 Powers not represented at the first Conference, 22 had already signed the Convention. Of the remaining 12, three only had declined to sign—namely, Turkey, Greece, and Switzerland. Three other Powers—Austria-Hungary, Norway, and Sweden—had refrained from signing, owing to some misapprehension as to the legislation which would be necessitated. Roumania was still considering the question. Bulgaria and Uruguay were ready to sign, while Peru, Montenegro, and Servia had not sent in any reply.

Each nation was then invited to state in turn whether, in view of the situation thus disclosed, it was prepared to proceed to ratify the Convention. All except four or five of those represented were said to be prepared to sign, subject, however, in most cases to the approval by their respective Legislatures. Statements were made on behalf of Germany, France, Great Britain, Portugal, and Russia as to their views in regard to the need of general international co-operation, in order to secure that the Convention should be effectively carried out.

At the third session the resolution submitted on behalf of the aforenamed group of Powers was carried unanimously; it formulated certain representations to be made on behalf of the Conference to the various abstaining Powers, explaining the need for their co-operation, and expressing regret that their signatures had not up to the present been affixed to the Convention. It was further decided that those Powers who were ready to deposit their ratifications should be at liberty to do so forthwith, and it is understood that several Powers have accordingly made such deposit.

Lastly, a resolution was passed, again unanimously, requesting the Netherlands Government, in the event of signature by all the abstaining Powers not having been obtained by the end of this year, to invite all the signatories to send representatives to the Hague to consider, not the question of ratification, but the question of putting in force the Convention of January, 1912. This would appear to register a definite advance; moreover, the representations to be made to the abstaining Powers on behalf of the Conference through the Dutch Minister for Foreign Affairs are, we understand, to be backed and supported by representations to be made by the Ministers of all the signatory Powers at the capitals of the countries in question. It is thus hoped to secure that worldwide co-operation which is so desirable, even if it be not essential, to rendering really effective the stipulations of the Opium Convention.

On July 9th a final sitting was held, at which the protocol prepared by the Comité de Rédaction, under Mr. Van Deventer's presidency, was signed on behalf of the twenty-four participatory Powers, and formal votes of thanks to Mr. Cremer, the President, and the Secretariat, completed the Conference.

### LIMING THE DEE.

NEXT year, when the British Medical Association goes to Aberdeen, it will be in a much safer position physically than it would have been had it gone this year, instead of going to Brighton—that is, if the British Medical Association is a water drinker, which probably for the most part it is. This year the inhabitants of the Granite City, after much debating and delay, several town elections, and the rejection of a water bill by Parliament, have decided to "lime the Dee." The Dee is the source of the Aberdeen water. It is a beautiful river, and from its source among the hills, until it loses itself near the "Silver City by the Sea," it flows through a country of rare beauty. Sad to say, in its course it gets contaminated by the sewage of the hamlets, villages, and towns on its banks. The pollution, according to some of the speakers on the Town Council, must be rather bad, for it was stated that for years "the citizens of Aberdeen had been drinking not only polluted but rotten water, and that the Dee was the sewer for Upper Deeside." Unfortunately, there is only two days' storage for this contaminated water, and no filtration before it goes into the service reservoirs near the town. The inhabitants of Aberdeen had the choice of a new water supply from the Avon plentiful and pure, but they decided against it, and now, while they are making up their minds what scheme to bring forward, they, after much agitation and debate, have found a temporary way out in liming the Dee. Some time ago we drew attention to Dr. Houston's report on the excess lime method for the softening, purification, and sterilization of water supplies. The experiments, so far as the Metropolitan Water Board is concerned, have been laboratory experiments, but the board decided to carry the matter a stage further by authorizing the expenditure of £600 to try the method in quantity. Should the further experiment prove the method successful as a germicide and financially, the intention of the board is to deal with flood water only. The people of Aberdeen have by force of necessity gone beyond the Metropolitan Water Board

in two very important particulars: they have experimented outside the laboratory and have applied the method to the whole of their water supply, which amounts to 6¾ million gallons a day. The method and result of this trial of excess of lime in bulk has been published in a joint report to the Town Council of Aberdeen by Mr. Cecil H. Roberts, water engineer, and Dr. Matthew Hay, medical officer of health. The experiment, which began at the end of February last, was continued for three weeks. The Aberdeen water is very soft (about 2 degrees of hardness, Clark's scale), and therefore the amount of lime necessary was small compared with that required for London water. Three parts lime (CaO) to 100,000 parts of water were used. The lime was mixed with twice its bulk of water, so as to make milk of lime. The water was tested chemically and bacteriologically before and after the addition of the lime. As delivered at the city the water had a minute proportion of free lime and was slightly hazy, the hardness was increased from 2 to 5 on Clark's scale, the colour appeared to be increased, but the taste was not perceptibly affected. The result of the experiment bacteriologically is exceedingly satisfactory, and confirms very decidedly the laboratory tests. This is seen if the result of the examination for typical *Bacillus coli* in the water leaving the service reservoirs is considered. The water taken at this outlet was tested on twelve consecutive days before the addition of the lime; on four of these days no *B. coli* was found, on the other eight days it was found in 1, 5, 10, 50, and 100 c.cm. After the addition of lime, and after the experiment was fairly started, there was a run of eighteen days in which no *B. coli* was found in 100 c.cm.; and when the lime was stopped the *B. coli* was found again in 1, 5, and 10 c.cm. As the result of this interesting and satisfactory experiment the Aberdeen Town Council resolved, after a heated debate, to lime the Dee at an estimated capital cost of £28,700, and an annual expenditure of £1,270. It is hoped that the excess liming scheme will be in working order in about six months, so that long before the British Medical Association receives its Scottish welcome from their colleagues and the good people of Aberdeen, the water set before them will be plentiful and pure. We are delighted that this practical experiment is in such good hands as those of the medical officer of health and the water engineer for the city, because we feel sure the work will be carried out in a thoroughly scientific and satisfactory manner. Moreover, we know that the reports, compiled with scientific care and accuracy, will be of great value to all those who have a contaminated water supply, and Aberdeen will in a practical way repay London for Dr. Houston's idea of the value of excess lime. It is interesting to remember that the lime process for softening water was given to the world by Clark when Professor of Chemistry at Aberdeen University.

## THE TREATMENT OF INEBRIETY.

ELSEWHERE in this issue will be found a summary of the annual report of the medical inspector under the Inebriates Acts, which, as usual, is conspicuous for the degree of sympathetic comprehension exhibited by Dr. Branthwaite in regard to those of whose well-being he is the ultimate guardian. A point on which he lays some stress is the relation between the treatment of inebriety by drugs and its treatment by more or less prolonged residence in a retreat either as a patient under the Act or as a voluntary inmate. For reasons not far to seek, the various more or less commercial bodies and individuals who devote themselves to the provision of "drug treatment" are prone to obscure the fact that just as the greater always includes the less, treatment by drugs as well as the application of many other measures of a strictly medical kind, is nowadays a constant feature of the work of inebriate retreats. Dr. Branthwaite also mentions that a bill for the consolidation and amendment of the Inebriates Acts is now awaiting the consideration of Parliament, but does not disclose its contents. In default of a strong expression of opinion on the part of the public it would seem useless to hope that it will include clauses eliminating the chief defect of existing legislation. It is now possible to deal after a fashion with persons whose unchecked inclination towards indulgence in alcohol and drugs has proceeded so far as to bring them into collision with the ordinary criminal law of the land. Those who so strongly recognize the danger of their indulgence in alcohol and drugs that they are ready to submit themselves to compulsory treatment in the hope of being delivered from their tendency, can also be dealt with more or less effectively. But there is no provision for an infinitely larger class—namely, the inebriates and narcomaniacs who, to their own ruin, and frequently to that of those connected with them—refuse to agree to compulsory treatment, and who, if they think about the matter at all, persist in a belief that they can cure themselves, with the assistance, perhaps, of occasional courses of drug treatment, or of a short stay in a retreat. Whatever restrictions on the sale of alcohol and drugs may be devised, it is not probable that they will ever suffice to place them out of the reach of the public entirely. Moreover, the majority of those who have paid attention to the subject believe that in the vast proportion of all cases of distinct alcoholism and narcomania there is a strong mental element. In view of these facts and of the injury to individuals and to the community that habitual inebriety causes, it would seem fully as legitimate to apply compulsory treatment to persons who can be definitely proved to be the subjects of this disease as to ordinary insane persons and those who are sufferers from zymotic disorders. Dr. Branthwaite also puts in a strong plea for the provision by philanthropic effort of retreats for those who are willing to submit to prolonged treatment but unable to obtain it owing to their lack of means, and gives reasons for holding that chronic inebriates are not less entitled to sympathetic consideration than many other classes of defectives to whom the public has shown itself ready to extend a helping hand.

## THE SOLDIER'S FOOTGEAR.

NAPOLEON used to say that an army marched on its belly. That is an epigram; but it is not a mere truism to say that it marches on its feet. Readers of *My Lord the Elephant* will remember Mulvany's deliverance on the vital importance of sound feet to a soldier. "At the very beginnin' av the marchin'," he says, "I wint sick like a fool. I had a boot-gall, but I was all for keepin' up wid the rig'mint and such like foolishness. So I finished up wid a hole in my heel that you cud ha' druv a tent-peg into. Faith, how often have I preached that to recruities since, for a warnin' to thim to look afther their feet! Our docthor, who knew our business as well as his own, he sez to me, in the middle av the Tangi Pass it was: 'That's sheer damned carelessness,' sez he. 'How often have I tould you that a marchin' man is no stronger than his feet—his feet—his feet!' he sez. 'Now to hospital you go,' he sez, 'for three weeks, an expense to your Quane an' a nuisince to your counthry. Next time,' sez he, 'perhaps you'll put some av the whisky you pour down your throat, an' some av the tallow you put into your hair, into your socks,' sez he. Faith, he was a just man." He was also a man of sound practical sense. In the report of the Surgeon-General of the United States army for the fiscal year which ended on June 30th, 1912, it is stated that the American military authorities are now fully convinced of the necessity of having military shoes made on a correct last and properly fitted. The

marching shoe now in use has been reported on adversely by various surgeons. The majority of them report (*a*) that the toe of the shoe is too low; (*b*) that the toe of the shoe does not properly protect the toes of the foot; (*c*) that the width of the shoe is too great for the length, and hence, if a shoe is long enough for the foot, it is too wide; and (*d*) the instep is too low. This question has been under consideration for several months by a board at Fort Leavenworth, with Major E. L. Munson, Medical Corps, as president. A great many radiographs have been made of feet with shoes of various patterns and without shoes. These radiographs show that the feet of practically all adults are deformed from wearing shoes made on an improper last. The board suggested that a number of shoes should be made on a set of lasts recommended by them, and that a practical test be made of these shoes under the supervision of the board. This was done. A command of 379 men were properly fitted with these shoes, under the supervision of the board, and went out on a practice march of 117 miles, occupying nine days. Careful notes were kept and examinations made both by inspection and *x* ray. It is believed that a satisfactory field shoe has been devised as the result of the work of this board. The report adds that the recommendations of the board with regard to fitting are very practicable, specifying the method of fit, and providing that the fitting of shoes shall be personally supervised by an officer. The suggestion is also made that officers should be given a course of instruction in care of the feet, including the fitting of shoes. Captain Weed, of the Medical Corps, in a special report on feet and footwear, points out that the fitting of the socks is a matter of great importance. A pair of socks of improper size may cause almost as much injury as shoes of improper size. This seems very sensible. It is refreshing to learn that military authorities are now ready to give attention to advice on such humble necessary details. How many years did it take to convince our own War Office of the expediency of relieving the soldier of the stock which kept him in a state of semi-asphyxia, and the cross-belts which hampered the action of the heart and caused aneurysm?

## ROENTGEN RAYS IN HIGH TENSION.

It has long been known that exposure to the action of the *x* rays diminishes the secretory activity of many of the glands in the body. Many authors, for example, have treated hyperidrosis of the hands and feet successfully by means of brief exposure to the Roentgen rays; excessive secretion by the salivary and lacrymal glands has been similarly cured in a number of instances, and since 1904 the treatment of uterine fibromas by exposure of the ovaries to *x* rays has been recommended and practised by a number of authors and experts. A recent writer (Rave) has collected 321 cases of exophthalmic goitre in which the enlarged thyroid gland was exposed to the action of the *x* rays, with considerable improvement in half the patients; the good influence of this treatment is said to be most marked in the nervous symptoms and tachycardia, the exophthalmos and the thyroid enlargement showing little change. It has occurred to Dr. Cottenot[1] to see whether patients with high arterial tension might not derive benefit from exposure of the suprarenal glands to the same sort of treatment. The glands lie deep in the body, at the level of the twelfth dorsal or the first or even the second lumbar vertebra; they can be reached if the *x* rays are thrown into the body from behind, though only a fraction of the rays applied to the skin will penetrate so deeply. Dr. Cottenot used a very hard tube (9 or 10 Benoist), placed with the anticathode 8 in. from the skin, and he employed an aluminium filter 1 mm. thick. An area 4 in. in diameter was irradiated, its centre on the twelfth rib, its periphery touching the middle line of the back. To protect the spinal cord a strip of lead an inch wide may be employed, but he thinks such protection unnecessary. The dose given at each sitting was 3 Holtzknecht units, half of which would be absorbed by the aluminium filter. The number of exposures made in the 29 cases treated varied from one to sixteen, and averaged about half a dozen; about four exposures would be given in a month. Of the 29 patients, 15 had high blood pressure without albuminuria; as a result of the treatment the blood pressure fell in all but one of the cases, and was lowered by from 10 to 20 mm. of mercury. Only 2 of the 15 were none the better for the treatment, and 9 improved greatly. A second group of cases contained 7 patients who had arterio-sclerosis and high blood pressure (210 to 280 mm. Hg) without albuminuria; in 3 the improvement was great, in 2 of them the results were strikingly good, in 1 fair; in 3 there was no functional amelioration. A third group of the cases contained 4 patients with albuminuria and high blood pressure; in all of them the pressure fell, by from 20 to 60 mm. Hg, but the functional improvement was little or none. In no case was the albuminuria increased. In a fourth group of 4 arterio-sclerotic patients with albuminuria the *x*-ray treatment failed either to lower the blood pressure or to improve the general condition. Dr. Cottenot concludes that the best results are obtained in the case of persons who have high blood pressure without either arterio-sclerosis or albuminuria—those, in fact, who are suffering from simple "hyperepinephry," or excessive secretory activity of the suprarenal glands. The way in which the *x* rays bring about these favourable results may be illustrated by the experiments he has made on dogs. In these animals prolonged and repeated exposures to the *x* rays brought about cell destruction and chromatolysis in the medulla and in the cortical zona fasciculata of the suprarenal glands, but without, as a rule, lowering the normal blood pressure.

[1] *Action des rayons x sur les glandes surrénales.* By Dr. P. Cottenot. Paris: Vigot Frères. 1913. (Roy. 8vo, pp. 180; 2 plates and 1 fig.)

## THE BALSAM OF FIERABRAS.

Sydenham said to Blackmore when, having chosen medicine as a profession, he asked what books he should read: "Read *Don Quixote;* it is a good book. I read it still." Whether our English Hippocrates meant this as a hint that observation is a better teacher than books, or whether the advice implied that the study of medicine is much helped by the knowledge of human nature to be gained by reading the great masters of the human heart, is a question that need not be discussed here. We only wish to call attention to a marvellous balsam described by the Knight of the Sorrowful Countenance, the virtues of which surpass even those claimed for their wares by American vendors of secret remedies. In Chapter X of the first part, after the "stupendous battle" in which Don Quixote overthrows the gallant Biscayan, he asks his squire if he had ever seen or read of a more valorous knight than himself. Whereunto Sancho answers that he had never served a bolder master than Don Quixote, prudently adding a prayer that they pay not for this boldness. He suggests that the knight should cure himself, for he was losing much blood through one ear. The practical squire adds that he has lint and a little *unguentum album* in his wallet. The knight replies: "All this might be excused if I had remembered to make a vialful of the Balsam of Fierabras; for, with one drop of it, we might spare both time, and want well all those other medicines." This, he goes on to say, is "a balsam whereof I have the recipe in memory, which one possessing he needs not fear death, nor ought he to think that he may be killed by any wound; and therefore, after I have made it and given it unto thee, thou hast nothing else to do, but when thou shalt see that in any battle I be cloven in twain (as many times

happens), thou shalt take fair and softly that part of my body that is fallen to the ground and put it up again, with great subtlety, on the part that rests in the saddle, before the blood congeal, having evermore great care that thou place it just and equally; then presently after thou shalt give me two draughts of that balsam of which I have spoken, and thou shalt see me straight become sounder than an apple." Whereupon Sancho says, if that be true, he will ask nothing else in recompense of his services but the recipe of this precious liquor; "for I am certain that an ounce thereof will be worth two reals in any place, and when I have it I should need nothing else to gain my living easily and honestly. But let me know, is it costly in the making?" "With less than three reals," quoth Don Quixote, "a man may make three gallons of it. But I mean to teach thee greater secrets than this, and do thee greater favours also. And now, let me cure myself, for mine ear grieves me more than I would wish." Recourse was then had to Sancho's lint and ointment. Fierabras, according to the legendary *Historia di Carlo Magno*, by Piamonte, was a giant, and King of Alexandria. He was the son of the Admiral Balan, a pagan or Saracen conqueror of Rome and Jerusalem. He was a great enemy of the Paladin Oliver, on whom he inflicted mortal wounds, of which Oliver cured himself forthwith by drinking a balsam, which he carried in two small barrels won by him at the conquest of Jerusalem. This balsam was believed to be a part of that which was used by Joseph of Arimathea to embalm the body of Christ. Oliver contrived to gain possession of the barrels, which he sank in a deep river. He then conquered Fierabras, who was baptised, and died a Christian. We can only think that it is merely ignorance of Cervantes's immortal work that has prevented some enterprising quacksalver from asserting that he has recovered the lost barrels of this miraculous balsam.

## A MEDICAL POET LAUREATE.

MANY doctors have been poets; a thing which is not unnatural considering that Apollo was a god of healing as well as leader of the Muses. The *Times* remarks that there have been few medical poets since Goldsmith. We must not, however, forget those we have had. We are especially proud of Keats; Thomas Gordon Hake has been considered by some critics as one of the greatest of Victorian poets, and we may claim a share in Francis Thompson, though he never finished his studies. But this is the first time, we believe, that the bays of the official poet of the Court and of the nation have been placed on the brows of a physician. Mr. Robert Bridges, whose appointment as Poet Laureate has just been approved by the King, was a practising doctor for several years. Born in 1844 and educated at Eton and Oxford, he studied medicine at St. Bartholomew's, and took the degree of Bachelor of Medicine at his university in 1874, and was elected a Fellow of the Royal College of Physicians of London in 1900. He was Assistant Physician to the Children's Hospital, Great Ormond Street, and Casualty Physician to St. Bartholomew's Hospital. He retired from practice in 1882, and has since devoted himself to poetry. His productions are cast in a severely classical form, the beauty of which can be adequately appreciated only by persons of the highest culture. Dr. Bridges would probably say with Wordsworth, one of his predecessors in the post of laureate, "Meet audience let me have though few." His poetry is warmly admired by the most competent judges. He has not courted popularity. This year, for the first time, we believe, a collected edition of his poems has been published, and this will serve to make his work known to many whom it has not yet reached. All lovers of true poetry must delight in his perfect artistry. The profession will fully join in the general expressions of approval with which the appointment has been received.

## HOSPITAL DISTRIBUTION IN LONDON.

SOMEWHAT over ten years ago we devoted a series of articles to the question of hospital distribution in London, showing, among other things, that the inhabitants of London on the south side of the Thames had some reason to complain of their distance from great institutions. At the present time it may be said that in the early future the needs of South London in this direction seem likely to be at least adequately met, and that in the ten years that have elapsed circumstances have arisen which go a long way towards modifying the whole problem of hospital distribution in London. In regard to the first point, King's College Hospital has already closed its doors in Portugal Street, Lincoln's Inn Fields, and in October will recommence work in a building capable of accommodating at least 500 in-patients at Denmark Hill, while the accommodation of several small institutions which were already at work at the end of 1902 in the southern areas of greater London has been increased. Cases in point are the Belgrave Hospital, Kennington, which has now accommodation for 40 in-patients; Bolingbroke Hospital, Wandsworth Common, which has now 60 beds; the Plaistow Hospital for Women and Children, which now possesses 25; Norwood Cottage Hospital, 32; Wimbledon Cottage Hospital, 18; and the Nelson Hospital for Merton and South Wimbledon, 24. In addition a new hospital with 25 beds is already at work at Putney, and the foundation stone of a hospital for women at Clapham Common, with an out-patient department near the Elephant and Castle, has recently been laid. Furthermore, it seems certain from what was stated at a recent meeting at St. George's Hospital—an account of which will be found at page 147—that within the next few years the Westminster Hospital and St. George's Hospital will have left their present sites and have recommenced work as a joint institution either in Clapham or in Wandsworth. In regard to the northern half of greater London, an account of a corresponding kind could be given, though there is no development, either achieved or in view, of so striking a kind as the removal to within its area of more than one great hospital long established in central London. None of the developments mentioned are taking place, it should be noted, in accordance with any definite plan of hospital distribution, and there is some reason to fear that when all schemes at present in view are complete, it will be found that many of the disadvantages of the previous condition of affairs have been reproduced with the loss of some of the advantages the older conditions presented. Meantime, it is certain that some of the factors affecting the whole question have been materially modified by the events of the last ten years. Though Greater London has continued to grow, it has not grown so fast as the means of locomotion. The ease, speed, and cheapness with which central London can be reached from any and every part of its outskirts are immeasurably greater than ten years ago. Indeed, to residents in outlying areas places right in the middle of London are often more easily and rapidly accessible than those which topographically are in their immediate neighbourhood, and it is by no means certain that in their new situations the great hospitals mentioned will be as easily reached as now by an equal number of persons. There are some other new circumstances that have a considerable bearing on the general problem. For example, school clinics and tuberculosis dispensaries may be expected, as time goes on, to do more and more of the work formerly done in out-patient departments, and the view of the British Medical Association, that the latter should be used mainly as consulting rooms and as places for specialist treatment

has now been frankly accepted by King Edward's Hospital Fund for London and by other authorities. In addition, there is ground for believing that the university side of London life will undergo considerable development in the early future, and in consequence the question of the relation of the great hospitals to medical education is one which could not now properly be left out of count when considering the right localization of these institutions.

## THE DISTINCTION BETWEEN MIND AND ITS OBJECTS.

It is not easy to give in the compass of a single treatise anything but the barest summary of the trend of philosophic thought in our time, even in one direction. Dr. Bosanquet,[1] however, in the Adamson Lecture for 1913, on the distinction between mind and its objects, has been eminently successful in the necessarily summarized account he gives of what is called the new realism—a modern school of philosophy in sharp contradistinction equally with the older eclectic materialism and what is called idealism. Dr. Bosanquet's intention in this lecture appears to have been expository rather than critical, although he conveys the impression that he possesses more than a lukewarm sympathy with the novel views promulgated by the young and vigorous school of philosophic thought for which the University of Manchester is responsible. Looking at the tenets of the twentieth century realism broadly, they are apt at first sight to suggest that they follow the line of least resistance; or, in other words, that they fulfil that spirit of compromise which is so characteristic a feature of the age. The new realism would seem, indeed, to be the golden bridge spanning the apparently impassable gulf between materialism and subjective idealism—a bridge which perhaps dissatisfied disciples of both the older schools of thought may have assisted to build. But it is by no means improbable that the apostles of the new realism may disclaim any such intention. It may well be their purpose rather to throw down the gauntlet to both the older schools. Briefly, twentieth century realism aims at establishing the continuity of the real world with mind, and certainly appears to be a fuller and more satisfying doctrine than either of the others. Its tendency is towards a more complete acceptance of external things in all their concrete richness of existence. It may be doubted, however, whether the most advanced realist would venture to sweep into his net not only "objects" themselves but all those attributes with which the mind endows them. True, the new realism has taken a great step forward in embracing within its scope the "secondary" qualities of objects, but, as Dr. Bosanquet points out, it fails to include what are known as the "tertiary" qualities. The purely psychical factor, which takes cognizance of the aesthetic qualities of an object, intervenes at this point. This very fact, however, would seem to establish the contention of modern realism for the continuity of the real world with mind. In an appendix to the treatise the author traverses the metaphysic and logic of a recent polemic, by various writers, called *The New Realism*.

## CREMATION IN THE UNITED STATES.

The Memorial Day exercises were held recently in the chapel of the Detroit Crematorium, which was filled to overflowing by a sympathetic audience. Professor George G. Hermann delivered the dedicatory speech, acknowledging the presentation of an organ to the Michigan Cremation Association by the family of the late Mr. Conrad Pfeiffer, who had taken a prominent part in promoting the cremation movement. An address was delivered by the Rev. Dr. Eugene Rodman Shippen, minister of the First Unitarian Church of Detroit. He said that to-day the advocates of cremation were witnessing the growth of public sentiment in their favour; it no longer required conspicuous courage to espouse the cause they represented. But a generation ago many of those whom they honoured that day had to make no small sacrifice in standing up for their principles. Men and women with social and affectionate natures did not lightly enter upon a course which might bring upon them the stigma of eccentricity or fanaticism, even though it were attached to their memories. All honour, then, to the noble company of pioneers in the army of cremationists! The clinging to the body implied, in the last analysis, a lack of faith. On the other hand, the calm surrender of the body as a mere shell, "one out of which the pearl is gone," was direct evidence of their belief that "flesh and blood cannot inherit the kingdom of God." The practice of incineration testified to the materiality of the body, and that was only the inverse statement of the spirituality of the soul. He insisted that those who clung to the body were materialistic, not the cremationists. Their duty was clear—to wage an educational campaign for their rational progressive principles. Not only was science overwhelmingly in favour of those principles, but the logic of events supported the advocates of cremation. Population was rapidly becoming urban; cities were growing by leaps and bounds. Not only was the land needed for commerce, industry, homes, but, what was more important, the danger from city cemeteries increased with the congestion of population. Dr. Shippen looked upon the cremation movement as a great humanitarian cause—the safeguarding of the health of society. The inertia, if not positive opposition of conservatism, on this question in English-speaking countries was appalling. In the United States there were only forty-eight crematories, whereas there should be tens of thousands.

## THE SOCIETY OF TROPICAL MEDICINE AND HYGIENE.

The Society of Tropical Medicine and Hygiene is one of the most flourishing of the medical societies; it has only been in existence six years, but has on its books at the present time 603 Fellows. At the recent election of officers and council, Sir R. Havelock Charles was elected president for the next two years, and Dr. F. M. Sandwith, vice-president. The suggestion of the Royal Society of Medicine that the Society of Tropical Medicine should become the Tropical Section of the Royal Society of Medicine has been carefully considered by the council of the former, which has come to the opinion that for many reasons it is desirable that the society should retain its independence. A memorandum explaining the facts of the case is now being sent to all Fellows of the Society of Tropical Medicine and Hygiene, who will be asked to record their votes for or against amalgamation; the result will not be declared until after November 1st, which is the latest date for votes to be received. It has been decided that no change shall be made unless there is a three-quarters majority of the Fellows who take part in the ballot. It should have been stated in our issue of July 5th that the papers by Dr. Box on fatal pellagra in two English boys, and by Dr. Mott on the histological changes in the nervous system of Dr. Box's case compared with changes found in an Egyptian case, had been communicated to the Society of Tropical Medicine and Hygiene. The society also placed at our disposal the microscopical photographs and the coloured drawings of histological appearances to illustrate Dr. Mott's paper. The drawing of the patient was made for this Journal to replace one which had been offered by the society. The omission to acknowledge the courtesy of the society was due to inadvertence, which we regret. It will be noticed that the publication of the series of papers on pellagra in the Journal of July 5th has brought

[1] *The Distinction between Mind and its Objects.* The Adamson Lecture for 1913, with an Appendix by Bernard Bosanquet, M.A., LL.D. Manchester: The University Press; London: Sherratt and Hughes. 1913. (Crown 8vo, pp. 73. 1s. net.)

to Dr. Sambon, the author of one of them, information as to two other cases of pellagra in England, one at Bridgnorth, Shropshire, and the other near London, and of a third in North Wales.

## NATIONAL ASSOCIATION FOR THE PREVENTION OF CONSUMPTION.

THE National Association for the Prevention of Consumption and other Forms of Tuberculosis will hold its fifth annual conference in the Central Hall, Westminster, S.W., on August 4th and 5th. The opening address will be delivered by the Right Hon. H. H. Asquith, M.P. On August 4th the subject of tuberculin treatment will be introduced by Dr. H. W. G. Mackenzie in a general survey, and papers on the nature of tuberculin—its preparation, varieties, and underlying pathological principles—will be read by Professor G. Sims Woodhead of Cambridge, and Professor Lydia Rabinowitsch-Kempner of Berlin. Professor Béraneck of Neuchatel will read a paper on the *rationale* of the use of tuberculin: its possibilities and limitations; and the therapeutic value of tuberculin and the principles of dosage will be dealt with by Professor Sahli of Berne and Dr. Nathan Raw of Liverpool. Papers on the place of tuberculin in treatment in relation to other methods will be read by Profesors W. C. White of Pittsburg, and Petruschky of Danzig, and Dr. W. Halliday Sutherland of London. The range of application of tuberculin will be discussed by Professor Adami, of Montreal, Sir James Kingston Fowler, Sir StClair Thomson, Sir R. W. Philip, Dr. Noel D. Bardswell, Dr. Clive Riviere, and others. On August 5th there will be a public discussion on the need for the co-ordination of antituberculosis measures. The opening address will be delivered by Sir R. W. Philip and the following delegates have promised to take part: Professor Adami (Canada), Dr. Hermann Biggs and Professor W. C. White (United States), Professor Pannwitz (Germany), Dr. Rist (France), Professor Saugmann (Denmark), Professors Tamburini and Signorelli (Italy), and Dr. von Unterberger (Russia). A conversazione will be held on the evening of Monday, August 4th, at which Dr. Rollier (Leysin) will give a cinematograph demonstration on the cure of surgical tuberculosis by direct sunlight. A film (the Fight against Consumption) illustrating the working of a complete co-ordinated scheme for dealing with consumption will also be shown. Tickets of admission are being sent to all medical practitioners in London. The Honorary Secretary, Dr. J. J. Perkins (20, Hanover Square, W.) will be glad to send cards of admission and vouchers for a reduced railway fare, together with a programme, to any doctors outside the metropolis who apply to him.

THE announcement is made that Mr. W. J. Thomas has undertaken to defray the cost of the completion and equipment of the Medical School of the University College of South Wales and Monmouthshire at Cardiff. Mr. Thomas, who is a coal-owner, has previously made other generous contributions to the college.

# Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

### Mental Deficiency Bills.

*England.*

THE necessary financial resolution having been passed by the House, the Committee on this bill reassembled on July 10th.

The postponed and money clauses were dealt with. Clause 64, which entailed the disqualification for an old age pension of a defective whilst detained in an institution, was deleted. Clause 24, which gives power to provide money for the salaries and other remunerations of the Commissioners and officers of the Board, was passed without amendment.

Clause 28, which deals with the powers and duties of local authorities, and which had been previously postponed, was the subject of prolonged discussion and of some amendment. The first subsection was amended on the motion of the Home Secretary to make it clear that local authorities are empowered to provide for "the maintenance of defectives" in institutions. On a further amendment, moved by Mr. Hicks Beach, "approved homes" were enumerated among those institutions towards which a local authority might contribute. The right of Poor Law authorities to continue to receive grants which they would have received if the Idiots Act had not been repealed, was secured by an amendment moved by Sir Norval Helme. In addition to these, some less important and some consequential amendments were made to the clause. The discretion and power of the Secretary of State were extended by some amendments made to Clause 30.

An important amendment was made to Clause 31, on the motion of Mr. Goldsmith, amended on the motion of Mr. Dickinson, by the substitution of one halfpenny for a farthing. The amendment provides that the expenses incurred by local authorities in respect of their optional powers under this Act shall not exceed the yield of a one halfpenny rate. It is in the following terms:

> Provided that the expenses incurred by a local authority in the exercise of their powers under this Act for purposes other than the fulfilment of their obligations under this Act shall not in any one year exceed an amount equal to that which would be produced by a vote of one halfpenny in the pound on the property liable to be assessed for the purpose as assessed for the time being for the purposes of that rate.

Clauses 43, 44, and 65 were afterwards added to the bill. In Clause 65 a definition of a certified house was inserted, on the motion of the Home Secretary, in the following terms:

> The expression "certified house" means a house in which defectives are received by the owner thereof for his private profit, and in respect of which a certificate has been granted under this Act.

A further amendment provided that the Scilly Islands should be deemed to be a county for the purposes of this Act.

At the adjournment, the Committee was engaged in considering the last clause of the bill. This clause, which relates to the title, and a short schedule only remain to be dealt with.

The Committee met again on July 15th, and concluded the consideration of the bill, which has now been reported as amended to the House. The amendments adopted include several new clauses. One of these moved by Mr. McKenna related to contribution orders on persons liable to contribute towards the maintenance of defectives under the age of 21; persons so liable may include a stepparent, and, in the case of illegitimacy, the putative father. Other clauses, also moved on behalf of the Government, related to the approval of premises provided by boards of guardians, to a scheme for the payment of superannuation allowances or gratuities to officers, and for the protection of defectives from sexual immorality, procuration, etc. One of the provisions of this new clause is to the effect that no consent shall be any defence in any proceedings if the accused knew or had reason to suspect that the person in respect of whom the offence was committed was a defective. Other new clauses have relation to the transfer of premises for use as institutions, as to the penalty for making false entries or untrue statements for the purpose of obtaining a certificate or approval, and as to power to authorize a committee for the care of mental defective persons to act as an asylums committee.

*Scotland.*

The proceedings of Standing Committee in the Scottish Mental Deficiency Bill strongly resembled those which took place last year on the English Bill. At the sitting held on Tuesday, July 8th, the whole of the sitting was devoted to a discussion as to whether the word "deeply" in line 11, Clause 1, should be replaced by the word "obviously." On Thursday, July 10th, Clause 1, which contains the definitions, was added to the bill without amendment. Numerous amendments were moved by Mr. Pringle and others, and the Committee adjourned after

having passed four and a half lines of Clause 2 without amendment.

The Committee sat again on July 15th, when Clause 2, with some amendments, was added to the bill. The net result is that two clauses have been got through in three days.

**Dogs Bill.**—The Committee stage of this Bill was continued in Standing Committee A on July 16th. The effect of this day's proceedings is that the bill is dead. Further amendments moved by Sir Henry Craik, Dr. Chapple, and Sir Philip Magnus were made in Clause 1. The effect of them collectively was to make the clause practically ineffective from the point of view of its promotors. Clause 1 as amended was then considered, and by a majority of 3 the Committee decided to delete it from the bill. As a result of this vote, the only enacting clause of the bill disappeared, and Lord Hugh Cecil raised the point whether under these circumstances the bill should not immediately be reported to the House. Ultimately it was agreed that Sir Frederick Banbury, who is in charge of the bill, should consult the Speaker as to the best course to take, and, if necessary, at the next sitting of the Committee, withdraw the bill. The opponents of the bill are chiefly indebted to Sir Henry Craik, Dr. Chapple, and Sir Philip Magnus for their persistent and successful efforts.

**Vivisection.**—Mr. Chancellor asked the Secretary of State for the Home Department whether, for the better protection of animals and in view of their greater experience and knowledge of animals which qualify them better than medical men to detect the symptoms of pain, he would appoint qualified veterinary surgeons to be the two additional inspectors of vivisectional experiments; and whether, as the object of inspection was to prevent cruelty, he would see that no person was appointed to those posts who was known to sympathize with the practice of vivisection. —Mr. McKenna said: With regard to the first part of the question I cannot add anything to the replies which I gave on February 12th and March 18th last. With regard to the second part I shall hope to obtain inspectors who are in sympathy with the objects of the Act they are called on to enforce.

**Local Government Board Laboratory (London).**—Mr. Astor asked whether the Local Government Board laboratory in London is utilized mainly for original research or for routine investigation, such as the examination of milk and sputum for tubercle bacilli or blood for evidence of typhoid fever.—The Parliamentary Secretary to the Local Government Board said that the work carried on in the Board's pathological laboratory fell under both the categories mentioned in the question, and gave a reference to page 123 of the Appendix to the Final Report of the Departmental Committee on Tuberculosis as illustrating the general character of the work.

**Vaccination at School Age.**—Mr. Black asked the President of the Local Government Board whether he was aware that in the United States vaccination is invariably only enforced at school age; and whether, in view of the absence of any special small-pox incidence amongst the child population there, he would consider the advisability of extending the age for compulsory primary vaccination in this country from six months to five years.—Mr. Burns said, in reply, that there appeared to be no general law as to vaccination for the whole of the United States of America, each State having its own legislation. Statistics as to age incidence of small-pox deaths could only be given for the special "registration area" in the United States of America, in which, in the years 1908–10, the proportion of deaths from small-pox at ages under five to deaths from this disease at all ages varied between 25.4 and 31.5 per cent. As regards the last point, the imperfect data available did not in themselves indicate the desirability of any change in the age of compulsory vaccination.

**Employment of Children.**—Mr. McKenna informed Mr. Alden that the number of children and young persons under 18 employed in factories in 1907, the last year for which figures were available, was about 830,000, and it was estimated that the number of those under 16 would be about 420,000. Returns of employment had been collected for 1912, but the figures were not yet available. Mr. McKenna, in reply to a further question by Mr. Alden, said that the numbers of half-timers in factories and workshops in 1907, which were the last available figures, were 17,916 boys and 19,211 girls, or 37,127 in all.

**Colour Blindness Tests.**—Mr. Cathcart Wason asked the President of the Board of Trade whether his advisers on colour blindness only consist of those who had advocated the wool test; and, if so, now that this test had been shown to be so defective, whether he would consider the advisability of adding to his advisers some one with knowledge and experience of the lantern test. Mr. Robertson said there was no reason whatever to think that his advisers had not the knowledge and experience necessary to enable them to advise on the lantern test which had been adopted on the recommendation of the recent Sight Tests Committee, of which two of them were members. Mr. Robertson, in reply to a question by Dr. Chapple, said that during the three months, April 1st to June 30th, fifteen men who failed to pass the local colour vision examinations were reported by the special examiners as having passed, and twenty-nine as having failed on appeal. The tests ordinarily used in the special examinations included a lantern test, various spectroscopic tests, a test with Nagel's anomaloscope, and any other tests which the special examiners saw fit to adopt.

**Highlands and Islands.**—Mr. Masterman informed Mr. Cathcart Wason that he hoped that the bill to provide a grant for improving the medical service in the Highlands and Islands would be introduced this week. The question of the travelling expenses of members of Insurance Committees was under consideration, but it would not, he was afraid, come within the scope of the bill. The Committee stage of the bill was clearly more suitable for discussion in the Scottish Grand Committee than in the whole House. The bill would be very short and, he believed, non-controversial in character. Mr. Masterman, in answer to an inquiry by Mr. Munro, said that every effort would be made to pass the bill this session.

**Forcible Feeding.**—A return has been made by the Home Office to the House of Commons containing the correspondence of the Home Office with the Royal College of Surgeons and Sir Victor Horsley with regard to the case of Lilian Lenton. The return comprises the correspondence of the Home Office with the Royal College of Surgeons, including a memorandum by the Prison Commissioners, and the correspondence of the Home Office with Sir Victor Horsley (Case of Lilian Lenton. H.M. Stationery Office, 190. Price 2½d.)

**Swine Fever (Serum Treatment).**—In reply to Mr. Stanier and Mr. C. Bathurst, who inquired whether the Board of Agriculture was taking any steps to obtain a report upon the methods now being adopted in Holland by the injection of a prophylactic serum, and whether the Board proposes to adopt a similar treatment and to make any modifications in their existing practice, Mr. Runciman said that his attention had been called recently to some remarkable reports concerning the successful treatment of swine fever in Holland. In the absence of precise official information, he immediately directed special inquiry to be made, which must take some little time, but there would be no avoidable delay.

AT the last meeting of the French Cremation Society, the President, Dr. Barrier, of the Academy of Medicine, announced that Professor Pinard, Professor of Obstetrics in the Paris Faculty, had become a member of the committee. Professor Pinard stated that he not only wished his remains to be cremated, but that besides he had directed in his will that an autopsy should first be made of his body at the Faculty of Medicine. M. Barrier stated that he had given similar directions about his own remains, and induced the members of the society to do likewise.

# England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

## LONDON.

### ST. GEORGE'S AND WESTMINSTER HOSPITALS.

SOME seven years ago a proposal to the effect that St. George's Hospital should remove from its present quarters at Hyde Park Corner to a new site in Chelsea was definitely formulated, but in the event was rejected at a special court of governors on the ground that no adequate offer for the existing site had been received; it was also urged that after it had paid for a new site and erected a new building the institution would practically have exhausted its resources. The idea of removing was not, however, abandoned, and negotiations that have been in progress at intervals ever since resulted in the holding of a further special court on July 10th. At this the Chairman of the Hospital, Mr. William West, gave a summary of the steps which had been taken by the House Committee in the matter, and of the views which had been reached by a subcommittee appointed to confer with the Westminster Hospital on the question of the possibility and desirability of an amalgamation of the two institutions. An offer for the site, subject to the rights of the Duke of Westminster over a portion of it, had been received from a firm which proposed to expend £600,000 on the provision of an hotel, and to pay to the hospital £285,000 in cash and £175,000 in the form of a second mortgage on the hotel and site, or £460,000 in all. This the House Committee considered was a fair offer, and, subject to approval also of the plan of amalgamation with Westminster Hospital, it thought it should be accepted. The Westminster Hospital also desired to quit its present site, and the committee representative of the two institutions reached the conclusion that their amalgamation was both possible and desirable. The suggestion was that they should club their funds and their entire interests, and together build a hospital of not less than 500 beds, with a medical school attached, on one or other several sites available—one of these being on Clapham Common and another in Wandsworth, the latter being deemed the more suitable. It was estimated that if this plan were carried out, the new institution, after paying for the new site and erecting thereon accommodation for not less than 500 patients, would have a capital fund for maintenance purposes of between £850,000 and £900,000. Under the proposed sale contract it would not be necessary for St. George's to leave its present site for two years, and during this period the new institution could be got ready. At Wandsworth the institution would be near the districts from which now came most of St. George's patients. Apart from the fact that it was more economical to run one hospital of 500 beds than two of 200 and 300 respectively, the joint institution would have the advantage of possessing a larger number of students, and therefore a greater choice of resident medical officers. In addition, the Board of Education seemed to desire to concentrate its help on the larger medical schools, and the Royal Commission on the University of London favoured hospitals of from 500 to 600 beds. Finally the speaker moved a series of resolutions intended to give effect to the views of the House Committee. These motions having been duly seconded there followed a general discussion, in the course of which one speaker objected to the proposals on the ground that the removal of the institution would inflict hardship on the inhabitants of Fulham and Walham Green. Mr. Warrington Haward, consulting surgeon, said that though he would naturally feel a pang at seeing St. George's quit its present site sentiment must have no part in the decision. At the time when he was a student the hospital drew its patients from localities in its immediate neighbourhood, which were now fashionable squares, while a little further afield around Victoria Station there had been displacements of population of a corresponding kind. As for amalgamation with the Westminster Hospital, there could be no sentiment against that part of the project, since originally the two institutions were one. The resolutions were then put to the vote, and on a show of hands were declared to be carried unanimously. They approved of the amalgamation scheme subject to the proviso that the governors of the two separate institutions should become governors of the joint institution and that therein the present consultant and honorary staffs of both hospitals should retain their positions, and authorized the House Committee to enter into a contract for the sale of the Hyde Park site on the terms mentioned; to enter into a contract for the purchase of a new site and the erection of a hospital to provide not less than 500 beds; and to apply for an Act of Parliament or take any other steps that might be necessary for carrying out the whole scheme.

### METROPOLITAN ASYLUMS BOARD.

The Metropolitan Asylums Board on July 12th decided to appoint a consulting physician for skin diseases in succession to Dr. T. Colcott Fox, whose duties were confined to ringworm treatment. The duties of the new position will be to advise upon all cases of skin disease submitted by the medical superintendents, and the salary remains at £350 a year. On the recommendation of the Children's Committee the Board appointed Dr. James Galloway, physician to Charing Cross Hospital and physician to the skin department of that hospital, to the position.

The Board approved plans for the extension at a cost of £88,500 of Tooting Bec Asylum.

## BIRMINGHAM.

### TUBERCULOSIS CENTRE.

ON July 4th the Lord Mayor, in the presence of members of the Public Health and Housing Committee and friends, officially opened the new tuberculosis centre for the city. The building, which was formerly in the occupation of the Water Department, is situated in Broad Street, near the centre of the city. The tuberculosis department is on the ground floor, and is divided into two wings arranged on either side of a spacious waiting hall. The male and female wings each consist of consulting, inoculation, and throat rooms, with a number of dressing cubicles. There are also a dispensary and facilities for the examination of sputum, etc. Parts of the building have been in use for some months, and at present the average weekly attendance of patients for examination, advice, and treatment is about 900. Four evenings and two afternoons a week are devoted to treatment and advice. Examinations are conducted on six mornings and four afternoons a week. The work is steadily increasing, and it is anticipated that the attendance will shortly be considerably augmented now that the whole of the department is available.

The Lord Mayor, in declaring the institution open, said that the centre marked a new step in their attack upon tuberculosis. It was intended to use it, in the first place, for examinations and diagnosis; in the second, for observation; and in the third, for curative treatment. It would also be a centre for the examination of contacts, and for the after-care of patients who had been treated in the municipal sanatoriums. It would be a general information bureau and educational centre.

Dr. Robertson (M.O.H. for the City) said that one aspect of the work was in danger of being overlooked—that the main object of the institution was not its curative work, but the efforts which would be made in the direction of prevention of the disease.

Dr. Brookes Dixon (Tuberculosis Officer) said it was desirable that the institution should not only be a centre for the treatment of tuberculosis but that it should also be a centre at which advice and information could be given to sufferers. In addition to that, it would be a sorting house from which selected patients would be drafted to the various sanatoriums and other institutions. In the winter months it was intended to give a course of lectures to patients and their friends on the economic and food value of different articles of diet.

The work at the new centre will be carried on by the medical and nursing staff connected with the City Sanatorium, with help from members of the public health staff and others.

# Ireland.

[*From our special correspondents.*]

### Treatment of Tuberculosis in Meath.

The Insurance Committee of county Meath recently asked the Women's National Health Association whether it would be prepared to place at the disposal of the Committee for the year commencing July 15th, 1913, the services of a part-time officer, who would act as medical adviser to the Committee, at a salary of £300 to include travelling expenses. The Committee also desired to make arrangements for a part-time nurse to attend the central dispensary two days a week. The Women's National Health Association acceded to the request, and informed the Committee that Dr. Warren would attend at the dispensary at Navan one day a week, and would open temporary dispensaries at Drogheda and at other places to be selected by the Insurance Committee, and would visit these dispensaries also once a week. The Navan branch of the Women's Health Association agreed to supply a part-time nurse at a salary of £30 a year, to attend at the dispensary and to visit the patients in the Navan district. This offer was unanimously accepted.

### The Registrar-General's Annual Report.

In his annual report for 1912 the Registrar-General for Ireland expresses his conviction that the following four facts will afford much gratification to the country:

(*a*) An increase of 1,102 in the population of Ireland in the middle of 1912, as compared with that in the middle of the preceding year; in other words, there were 1,102 more births than deaths and emigrants during the year ended June 30th, 1912;
(*b*) The lowest annual death-rate from all causes recorded for Ireland since 1871—namely, 16.46 per 1,000 of the population;
(*c*) The lowest annual death-rate from tuberculous disease on record—namely, 2.15 per 1,000, the next lowest rate from this disease being 2.20 per 1,000 in the previous year (1911). The number of deaths caused by tuberculous disease in 1912 is 186 less than 1911, and 3,257 less than the number recorded in 1904; and
(*d*) A decrease in infant mortality from 94 per 1,000 births registered in 1911 to 86 per 1,000 births registered in 1912. This is the lowest infant mortality-rate recorded for Ireland. The highest infantile mortality-rate was in the year 1880—namely, 112.

In the aggregate the deaths last year in Ireland from tuberculosis numbered 9,437, or less by 186 than the number registered in the year 1911. The total is equivalent to 2.15 per 1,000 of the population of Ireland estimated to the middle of the year 1912, as against 2.20 per 1,000 in 1911. Since 1904, when the death-rate from tuberculosis was 2.9 per 1,000, the rate has fallen steadily. Of the 9,437 deaths from tuberculosis, 4,682 were of males and 4,755 were of females.

The marriage-rate was 5.31 per 1,000 of the estimated population, showing a decrease of 0.04, as compared with that for the year 1911, but an increase of 0.12 as compared with the average rate for the ten years, 1902–1911; the birth-rate was 23.0 per 1,000 of the estimated population, being 0.2 under that for the preceding year, and 0.3 under the average rates for the ten years, 1902–1911; and the death-rate (16.46 per 1,000) was 0.07 below the rate for the preceding year, and 0.83 below the average rate for the ten years, 1902–1911.

The number of deaths registered was 72,187, equivalent to 16.46 per 1,000 of the population estimated to the middle of the year. The deaths of males amounted to 35,986, and those of females to 36,201; the rate for males being 16.44 per 1,000, and for females 16.49 per 1,000. There were 8,727 deaths of infants under 1 year of age (4,991 males and 3,736 females.) This is equivalent to a rate of 86 per 1,000 births, and is 8 per cent. under the rate for 1911. The average infant mortality-rate for the ten years, 1902–1911, was 95 per 1,000 births. It would appear from the returns collected by the Royal Irish Constabulary and the Metropolitan Police, who acted as enumerators at the several Irish seaports, that the number of emigrants (natives of Ireland) who left the ports of Ireland during the year 1912 was 29,344 (15,325 males and 14,019 females). Of the total emigrants, 3,855 were natives of the province of Leinster, 7,167 of Munster, 11,852 of Ulster, and 6,470 of Connaught. Of the 29,344 emigrants, 7.6 per cent. were under 15 years of age, 85.9 per cent. were between 15 and 35 years old, and 6.5 per cent. were 35 years or upwards.

# Scotland.

[*From our special correspondents.*]

### Glasgow Royal Infirmary Post-Graduate Courses.

As in former years a comprehensive course for graduates will be held during September. This course will include the following classes: Clinical Medicine, Clinical Surgery, Operative Surgery, Surgical Diagnosis, Clinical Gynaecology, Electro-therapeutics, Urology, Clinical Examination of the Urine and Digestive Products, Anaesthetics; Diseases of the Ear, Skin, Throat and Nose, and Eye. The latter course is one specially designed with relation to school medical inspection and treatment. Complete syllabus, and any other necessary information may be obtained from the Superintendent of the Infirmary.

### The Public Health of Leith.

Dr. William Robertson's annual report on the health of Leith for 1912 was issued on May 28th. The death-rate was low, so low that the striking fact emerged that whilst the population was larger than in the decade 1891–1900, the mortality figure was lower. Since notices had been erected along the foreshore warning people against eating shellfish the decline in the notifications of typhoid fever had been very marked; only 2 cases had been notified during the year, and these had been imported. There had been no typhus or small-pox. The number of scarlet fever cases was practically the same as in the previous year, but the period of residence of such cases in the East Pilton Hospital had been reduced to an average of 29.8 days, as against 42 or 45 days formerly. It was calculated that last year over £700 was saved to the rates in the treatment of scarlet fever, because each patient required fourteen days' less isolation in the wards than before. The reduced average residence for diphtheria had also produced a reduction of over £500 in the cost of treatment. There was no place where the administrative control of pulmonary tuberculosis was more efficiently conducted than in Leith; and they could boast that it was the only town in Scotland at present that had staff and institutions controlled by the local authority. There was accommodation for forty patients in the sanatorium, and the use of tuberculin had enabled Dr. Robertson to curtail the period of residence in the sanatorium. Further improvement would follow the introduction of perfected preparations of tuberculin. The problem of a pure milk supply would be solved if local authorities throughout the country could devise a uniform scheme for dealing with the ventilation of cowsheds, their cleanliness and construction, and would insist upon clean cows, clean hands to milk them, and effective methods for filtering and cooling the milk.

### Edinburgh Dental Hospital and School.

The annual prize-giving of the Edinburgh Dental Hospital and School was held on July 9th. A large company of students, former students, members of the staff, and friends were received by the Dean and Mrs. Guy. The report by the Dean stated that the school was flourishing and progressive. There were 94 students engaged in dental hospital practice, and 36 workroom apprentices. During the year 41 students had taken the L.D.S. diploma. Sir Robert Philip presented the prizes and delivered an address. He impressed upon the students the importance of always endeavouring to do their very best; their work remained to bear witness to their skill or the lack of it. He believed that their school, inheriting and sharing the traditions of the Edinburgh Medical School, was second to none, and to them would fall the duty of maintaining its reputation. In public health and in prophylaxis the care of the teeth was a most important factor, and therefore urged the necessity of a full medical training for dentists. The address was loudly applauded. During the evening a musical programme and a dramatic sketch were performed.

---

The late Dr. John Thorowgood, formerly Warden of the Society of Apothecaries, left estate valued at £16,244.

# Correspondence.

## EVIDENCE FOR AND AGAINST THE USE OF TUBERCULIN.

SIR,—I have been an interested reader of the various letters relating to the evidence for and against the use of tuberculin, and I now think the time opportune to mention the results obtained at the City of Bradford Tuberculosis Dispensary.

For two years I used tuberculin in a sanatorium, and was not at all impressed with its utility. In fact, I was inclined to think it did more harm than good.

On appointment as tuberculosis officer for Bradford fourteen months ago, and commencing with no sanatorium, I felt compelled after a visit to the leading tuberculosis dispensaries to make use of tuberculin to the fullest extent, knowing the failure of other methods of treatment except institutional methods. The initial doses causing reactions in sensitive patients were not encouraging, but I persevered, and much to my surprise the results in a certain class of case have far exceeded my expectations.

I have divided the tuberculin cases into two main classes:

A. Those with the prospect of arrest of the disease or of sufficient improvement to enable them to follow their occupation.

B. Those with little hope of recovery.

Of Class A a certain percentage were treated at the dispensary; (*a*) working, (*b*) not working. A second group required short institutional treatment, four to six weeks, followed by dispensary treatment. A third group required three months' institutional treatment, followed by attendance at the dispensary.

In Class B, those with little hope of recovery, I have found tuberculin to be of little use, though in a small percentage of cases good has undoubtedly accrued.

Out of 200 cases treated at this dispensary during the first six months, with or without short or long sanatorium treatment, I took 50 cases haphazard and followed them very carefully. In 49 out of the 50 the immediate results were encouraging. The one which retrogressed the whole of the time was a very advanced case, with extensive bilateral disease. One of the 49 was a woman with glands in the right axilla, preventing her lifting the right arm above the shoulder. This patient was very sensitive to P.T.O., and in a short time entirely recovered the use of her arm, and the glands were half the size.

It is now fourteen months since the 50 cases first commenced treatment, and at the present time I believe 50 are alive:

40 are well and working.
3 are well but not working.
4 are not well and are not working, 2 being very advanced cases and 2 having periodic attacks of bronchitis.
1 not seen lately, but is known to be well.
1 whereabouts not known.
1 fairly well, but much better than for the last two years.

*Of these 50 cases:*

29 were treated at the dispensary alone.
10 by residence of short duration in an institution, followed by dispensary treatment.
11 by residence of long duration in an institution, followed by attendance at the dispensary.

I think that these results fully justify the continued use of tuberculin in the dispensary and sanatorium practice. There is a small group of cases, particularly in school children, in which tuberculin seems to be of little use, and these cases improve on virol, Kepler's extract of malt or malt and oil and other remedies. On the other hand, a considerable number of children derive great benefit from tuberculin injections.

I can quite understand certain medical men decrying tuberculin because they choose unsuitable cases for treatment. I have had patients sent to me with bronchitis and tubercle superadded for tuberculin, and also cases of haemoptysis, but my experience is that these cases are not usually suitable for tuberculin treatment.

I should like to emphasize the fact that everything depends upon the selection of cases, the technique, careful administration, and choice of tuberculin used.

These results have been verified by Dr. J. Scott Byrne, the assistant tuberculosis officer.—I am, etc.,

HAROLD VALLOW, M.D.,
July 5th. Tuberculosis Officer, City of Bradford.

## THE TREATMENT OF PNEUMONIA.

SIR,—I write to support the view of Dr. W. J. J. Arnold, as expressed in his letter published in the JOURNAL of July 12th, with regard to the value of quinine in the treatment of pneumonia, and would reiterate his advice that it should be given as early as possible, modified, perhaps, by a recommendation that a large dose should be given at once and repeated quickly if necessary.

My practice for many years has been to get the patient, so to speak, saturated or semisaturated with this drug in as short a time as is practicable after the disease is manifested. I generally give to an adult 5, or even 10, grains at once, combined with some bromide or hydrobromic acid, and repeat it if the temperature does not fall or if this soon rises again.

The supplementary treatment which Dr. Arnold advocates I think will be difficult to improve upon, but as a change or substitute for strychnine in the later stage of depression I nearly always give tincture of nux vomica with compound spirit of ammonia, and I look upon the ammonia as a valuable adjunct in most cases. Alcohol is not always required, and may be injurious if given in large doses when coma is threatening, but yet be urgently necessary when heart failure threatens. However, the giving of quinine freely at the commencement of the illness I think is essential, and I echo Dr. Arnold's wish that it should be more widely tried, and I would even say that it should be rarely if ever omitted.

The successful results in Dr. Arnold's series of cases must have been very satisfactory to him, but I am not surprised at them, as I have had almost, if not quite, as good results in my own cases, thanks, I believe, to the early and liberal giving of quinine.—I am, etc.,

North Shields, July 12th. ROBERT SEPTS. PEART.

## THE TREATMENT OF NEURASTHENIA.

SIR,—I have read with great interest the letter of my friend (Dr. Haddon) on the treatment of neurasthenia (JOURNAL, July 5th, p. 47), but I think that for the sake of the apparently numerous "victims of that sad condition" a word of warning is necessary.

It is no doubt true, as Dr. Haddon tells us, that "to eat only once in the twenty-four hours, and little enough then," will relieve the gloom of depression; but it is a remedy which cannot be continued indefinitely without bringing "premature, though it may be welcome, death."

I also wish to point out to your readers, as I have already done to Dr. Haddon himself, that there is another and a better way out of this trouble. Considerations of space and time oblige me to state the matter very shortly, but in *Uric Acid in the Clinic* (London, 1910), pp. 81, 96, 112, and elsewhere, I have shown that neurasthenia is really cardiasthenia, and that in the cases I describe there is defective intracranial circulation due to absolute or relative cardiac debility. A strong heart may be overcome by very abnormal conditions, or a weak heart by conditions which are only slightly abnormal. In either case we get defective circulation in the brain and great nerve centres, also in the skin where it is visible to the eye.

How does one meal a day, and that a small one, improve the intracranial circulation? Thousands of people to-day have not enough circulation power to work their brains and their digestive organs at one and the same time. This is the explanation of the general call for a light lunch in all the great centres of business activity. Dr. Haddon's remedy relieves the heart of a large part of its digestive work, and gives it also many more hours of relative rest than it usually gets on three or more meals a day. Hence the available heart power now suffices to keep up a better circulation in the brain, and the gloom departs.

But this treatment entails underfeeding and leads eventually to defective nutrition of all the muscles, including that of the heart. I know that to take only one

meal a day relieves depression, hence the saying, "Always be hungry and you will always be happy"; but it is not possible to be always hungry without eventually vanishing away, and I sincerely hope that Dr. Haddon is not himself carrying this process too far. The real remedy, as I point out in my book and in a paper on underfeeding which I hope to contribute to the Medical Section of the International Medical Congress next month, is to take work off the heart by methods which can be continued indefinitely without danger. One of these is to diminish fluids, which has the effect of lowering blood pressure and giving the heart a better grip of its work. Another is to clear the blood of uric acid, as there is no greater cause of chronic heart fatigue than a capillary circulation constantly blocked by waste products. While this treatment is being carried out there is no necessity to underfeed at all. On the contrary, the heart needs to be supplied with plenty of protein in order that it may develop that muscle power which alone will produce a satisfactory intracranial circulation.

Neurasthenia is due to defective circulation, of which cardiac debility and defective capillary circulation are the chief factors. One meal a day merely remedies for a time one of the results, permanent cure is only possible by removing the causes.—I am, etc.,

London, W., July 5th. ALEXANDER HAIG.

## THE FORM AND POSITION OF THE STOMACH.

SIR,—The discussion that has been going on among your correspondents as to the shape, etc., of the stomach, since the anatomists, at the last annual meeting of the Association at Liverpool, opened our eyes to falsity of previous teaching, has been most interesting, and ought to be instructive.

During my professional practice there were two signs which puzzled me—first, clear percussion below the left ribs, and, second, clear percussion as high as the fourth rib in front on the same side. Since I have noted my own symptoms and tried to understand them, I have regarded the lower area of clear percussion as due to gas in the colon, and the upper clear area as due to gas in the stomach. I had noticed also that when oppressed by gas in the stomach in bed, when lying on my right side, if I turned on to my left side the gas escaped by the mouth, and I could not explain that fact, believing in the then teaching as to the shape and position of the stomach—namely, that it was like a bag lying across the body, the oesophagus entering the upper cardiac end and the outlet at the pyloric end. When, however, at Liverpool I learnt that the stomach was a tube, and that the oesophagus entered, not at its highest part, but some distance from it, the reason why gas did not escape from the stomach when lying on the right side, but did when I turned on to the left side, was explained. That is a lesson physicians ought to learn from recent anatomical research; and if they will recognize the fact that the presence of gas in the stomach or intestine is the cause of almost every ache, and prescribe such food as causes no gas to be generated, and permit no drink of any kind, they will once more become the valued advisers of patients, who in these latter days have forsaken their shrines for those of the surgeons.—I am, etc.,

Hawick. JOHN HADDON, M.D.

## SLEEPING SICKNESS AND BIG GAME.

IN reference to the article by Dr. Yorke, in your issue of June 21st, on this subject, and your article thereon, I think a pause should be made before accepting the assumption as a fact that the trypanosome found in the big game is the same as that known in man as *rhodesiense*. It would appear that this conclusion has been come to by comparison of the morphology and of the pathogenicity of the two trypanosomes. It is well known that morphology leads to many pitfalls in the comparison of trypanosomes, and it would hardly be satisfactory to rest the identity of the two on the percentage of deaths caused by them in animals artificially infected being much alike in a series of experiments. I suggest that before the slaughter proposed a greater degree of certainty should be approached on this subject.

My son, Mr. J. A. Neave, before leaving for British Central Africa, suggested that quite a large area could be enclosed in the district referred to by means of wire, and that if all big game were eradicated from it and the fence looked after, the fly after a period could be examined for this trypanosome, supposing always that *G. morsitans* would remain there in the circumstances (another interesting possibility).

I suggest that this experiment also would be advisable before proceeding to the said slaughter.—I am, etc.,

London, W., July 10th. SHEFFIELD NEAVE.

SIR,—I have your article of June 21st on the above subject before me. It was in 1909 that several Europeans who had crossed the Luangwa were attacked by a virulent form of trypanosomiasis. One was a Boer general who had become a missionary and was on his way to Nyasaland. Another was a well known medical man from South Africa. An elephant hunter and a farmer's son, a boy of 16, were amongst the others. In each case the symptoms were severe and rapid, and each complained of the painfulness of one bite in particular which some insect had given. In some cases it showed on the back of the neck as a very inflamed and dark circular bruise. In the case of the elephant hunter the place was on the shin and became a sore. He attributed it himself to a leech bite. I specify these bites particularly, as the bite of *G. morsitans*, though painful, does not produce such conditions in other parts of the country that I have ever seen. When I have been bitten the bites, which are little hard lumps, soon disappear.

As you say, sleeping sickness cases previous to the year 1909 had not been known in the Luangwa Valley. An instant search was made for *G. palpalis*, but none were found. Then Yorke and Kinghorn found that the trypanosome was carried by a number of antelopes, and from them transmitted to man by *G. morsitans*. This has opened up a very large question. If antelopes carry this disease, then they must be shot out, and when they are all shot, will it be possible for future generations of tsetse flies to be born clean and remain non-infective? Let me give a few of my observations on the subject of the tsetse flies, made when employed in North-East Rhodesia. My work lay in that district close to the Western Congo border on the shores of the beautiful lake Mweru. This lake is fringed in most places with bush which is infested with *G. palpalis*. The lake is full of fish, and was in the past closely settled with villages. The inhabitants not only drew their water from the lake, but were constantly fishing it, especially from the shores, with drag nets. Yet in 40,000 examinations made between August, 1907, and August, 1909, only 17 cases of sleeping sickness were found. The hills behind the lake were waterless, so that the game lived between the hills and the lake, to which they came to drink. Herds of puku remained all day in the bushes beside the flies. Therefore, here *G. palpalis* had a double supply of blood from men and animals. There was no *G. morsitans* except towards the lower part of the lake near the Kalunguisi river. This river was so infested by *G. palpalis* as well that the Government station had to be removed, as the flies came into the house from the river 100 yards below. There was a village with about 2,000 people on this part of the river, yet to my knowledge there never was a case of sleeping sickness found in it, and these people were bitten by both *G. morsitans* and *G. palpalis*. At the upper end of the lake, the boundary between the Belgian Congo and North-East Rhodesia, is the small Luchina stream running into the lake. *G. palpalis* is on this stream, and a village 600 yards off has *G. morsitans*. Here are numerous waterbuck, puku and bushbuck.

Further back from the lake, in a dip of the hills twenty miles away in an easterly direction, is a village called Lambine. Close to it is a stream in which sitatunga live and come out in the morning to feed almost in the village. A lion killed one when I was there last within forty yards of the huts. Now I have never seen any village so infested with *G. morsitans* as this was. Not only did they force their way into the tent, but attacked the natives and myself while I was examining the inhabitants, and they refused to be driven away. Yet I never got a case of infection from this village or even a vestige of enlarged glands. If the sitatunga carry the trypanosome, it is curious that there never was a case of sleeping sickness in this village. People were always coming and going from

the infected villages on the lake. They had a chance of being bitten by the *morsitans* when staying in this village. We know that these flies live on buck; in this case, why were the sitatunga not infected?

Though it was only in 1909 that public attention was called to the existence of sleeping sickness caught in the Luangwa Valley, yet previous to this there had been some deaths following each other in rapid succession in the family of a cotton grower on the banks by the river. The road that all travelled when coming from the railway at Broken Hill passed through his estate. His house, or rather collection of living huts, was situated within forty yards of the river. This gentleman lost his mother, sister, brother, and a friend within a short space. I do not know what caused their deaths. Previous to this a Government official at Nawalia was very ill for some time, and died on the road before he could see a doctor. This was, I think, in 1906 or 1907. Now, this cotton grower used to employ native labour to work on his flourishing estate. Some of these came from Tanganyika, where *G. palpalis* is most plentiful and infected.

I should like to suggest, with much deference, that the importation of and residence of men infected with *T. gambiense* from Tanganyika for some months in the Luangwa Valley at the very place where so many travellers subsequently got fatally bitten may have been the cause of the game becoming infected. Also I want to know if the strain of *T. gambiense* when grown in the blood of animal hosts would become more virulent and the trypanosome become the *T. rhodesiense*. Before it is decided that all game be exterminated in Nyasaland and North-Eastern Rhodesia, or any other localities where sleeping sickness exists, a careful investigation should be made in other districts and the blood of all antelopes examined. It is possible that the bulk of these ungulates will be found free from either *T. gambiense* or *T. rhodesiense*.—I am, etc.,

Heliopolis, July 7th. J. DUNBAR-BRUNTON, M.D.

## CELLULOID IN TUBERCULOUS DISEASE OF THE SPINE.

SIR,—While reading Mr. Gauvain's interesting paper, some points for criticism at once occurred to me, and the more I have thought over them, the more I have hoped you will allow me to express them in a perfectly friendly manner in your columns.

1. Mr. Gauvain states (JOURNAL, June 7th, p. 1201, col. 2) that "celluloid has this extreme value—the jacket itself can be made by the surgeon who is treating the case or made under his immediate supervision, and this is an undoubted advantage." Later on, p. 1202, col. 2, we are informed that "the number of layers of muslin with incorporated celluloid will vary usually from 10 to 20," and "that between each layer of muslin which is applied, and which is coated with celluloid, an interval of from 5 to 10 hours should elapse to allow the acetone to evaporate and the splint to dry."

From this it is evident that a jacket in an average case will take fifteen days to make, if not longer. Now it may be easy for Mr. Gauvain with a specially trained staff in a special institution, to "immediately supervise" the daily steps in the making of these jackets, and I have no doubt he does so, but it is impossible for a surgeon in private practice to give up the time. It seems to me, however, entirely unnecessary, for the actual manufacture of the jacket, except for the "carving" of the cast, is entirely mechanical; and any intelligent instrument-maker's man used to plaster could, with the help of Mr. Gauvain's admirable directions, carry out the whole process. I cannot agree with Mr. Gauvain that the surgeon should turn himself into a surgeon-mechanic; surely he has been trained for something more idealistic. The surgeon should know how to measure a patient for an instrument and how to fit it when it arrives, but his time is too valuable to be spent in making it with his own hands.

2. Mr. Gauvain omits saying anything about the price of the finished jacket. As it takes a portion of fifteen or twenty days to make, the charge for labour alone must be high.

3. Mr. Gauvain states (p. 1201, col. 2) that, "after extensive use of every mechanical support which he has been able to try, none presents, to his mind, so many advantages as celluloid." May I ask, has he been able to try Thomas's posterior spinal splint? This splint, supplied at a cost for a hospital patient of between two and three guineas, slightly more for a private patient because more elegantly finished off, has all the advantages claimed for celluloid, without its laborious manufacture. In the last three years I have repeatedly used this splint with entire satisfaction in the same cases in which Mr. Gauvain would use his celluloid splints, and have found it so excellent that perhaps you will allow me briefly to describe its application.

A tracing of the patient's spine is taken, as described elsewhere,[1] and this, together with the circumferences of the abdomen and pelvis, and the distance of the top of the patient's shoulder, when sitting, from the seat of the chair, is sent to the instrument maker, who in five days delivers the splint ready to be applied. It consists of a padded leather backboard, containing two parallel thin wrought iron rods, connected above and below, the whole moulded to correspond with the tracing made by the surgeon. It is fixed to the patient by a pelvic band and an abdominal band; these are joined together in front by a vertical band; there are also groin straps and axillary straps, the latter having an attachment to the vertical band. When applied, "its weight is negligible, it affords no obstruction to respiration or digestion, the support and protection it affords is ample, and the comfort and security it confers upon the patient renders it of unequalled value in mechanical treatment at this stage of tuberculous disease of the spine."—I am, etc.,

London, W., June 7th. PAUL B. ROTH.

## MEMORIAL TO THE LATE DR. GEORGE ALEXANDER GIBSON.

SIR,—Friends of the late Dr. George Alexander Gibson will be pleased to learn that the recent appeal for a fund to establish a "Gibson Memorial Lectureship" has already met with a most gratifying response.

A meeting of those subscribers who have intimated that they wish to join the general committee of the memorial fund will be convened some time in October. After this the subscription list will be closed, and a copy, together with the resolutions of the general committee, will be sent to each subscriber.

In case there may be any of the late Dr. Gibson's friends who did not receive an intimation and who might desire to subscribe, I may add that the honorary treasurer of the memorial fund is Mr. A. Gray Muir, W.S., 19, York Place, Edinburgh.—I am, etc.,

GEORGE A. BERRY,
Convener of the Executive Committee.

31, Drumsheugh Gardens,
Edinburgh, July 9th.

# Medico-Legal.

## VERONAL.

AT an inquest in Marylebone on July 12th the death of a barrister, aged 39, was ascribed to an overdose of veronal. The evidence was to the effect that the deceased was not known to indulge in narcotics, but was of high strung, nervous disposition, and had recently been worried and overworked. The facts suggested that during the two days preceding his final illness he had consumed the contents of two bottles containing veronal tablets. During the first of these days he was sleeping heavily on a sofa, and during the second was excited and restless. At length he retired to bed, and shortly afterwards was found in a state of coma, which despite medical attendance endured until his death three days later.

## ALLEGED PERSONATION.

AT Porth, on July 11th, Richard Harrison, otherwise known as "Dr. Arthur Piercefield Walters," an elderly man, was committed for trial on charges of falsely issuing and forging certificates of death.

Mr. D. Rees, solicitor, who represented the Public Prosecutor, said he would prove that the prisoner was not a registered medical practitioner. It was not known whether he had any medical qualifications. In the name of Richard Harrison he acted in 1897 as a qualified assistant to a doctor in Swindon. For the last three or four years he had been in the Pontypridd neighbourhood. He had carried on a practice in Treforest, and was latterly practising at Tonteg. It was alleged that he had personated another gentleman who was on the *Register*.

[1] *Practitioner*, July, 1912, The Measurement of Deformity.

Dr. Arthur Piercefield Walters, practising in the Isle of Mull, Scotland, gave evidence that he was admitted as physician and surgeon in 1889. He then went to Swindon as assistant to Dr. Swinhoe, remaining there until 1894, and returning for a short period after an absence of one year. He had never seen prisoner before. The signatures on the certificates produced were not his, nor had he authorized any one to sign them. Witness said that the name Arthur Piercefield Walters which appeared in the *Medical Register* referred to him.

# Universities and Colleges.

## UNIVERSITY OF EDINBURGH.

### MEDICAL GRADUATION.

ALTHOUGH some distinguished medical men received the honorary degree of LL.D. at the ceremony on July 4th, the medical graduation proper did not take place till July 11th. Formerly when there was only one Final Examination in the year the medical "capping" always came in the end of July, generally on the last Saturday of the month; but with changes in the dates of examinations and alterations in the closing of the summer and winter sessions, the great day for the medical graduands falls now earlier in the month. On the present occasion sixty-one men and one woman received the degree of Doctor of Medicine, and three men that of Master of Surgery. Five gold medals were awarded for theses, four going to the M.D.'s and one to the Masters in Surgery. One of the M.D. medals was given for a thesis on an anatomical subject, another for one on chemistry, and the other two were awarded for clinical work; it is interesting to note that one of the recipients of the greatly coveted gold medal was a medical missionary in active service in China under the English Presbyterian Church. Ninety-eight degrees of Bachelor of Medicine and Bachelor of Surgery were also given, of which five were to women. Diplomas were given in Tropical Medicine and in Psychiatry, and two graduates received the degree of Bachelor of Science in the department of Public Health. Professor Robinson, the occupant of the Chair of Anatomy, was "promotor" on this occasion, and in his address to the graduates spoke somewhat hopelessly about the position of the medical profession at the present time. It had been made a pawn in the business of party politics, and in that business party advantage was the main consideration. He struck a pessimistic note, but appealed to the graduates to combine together in the interests of public health, which were also the interests of the profession; united action was needed to gain their ends.

The following is a list of those on whom degrees and other awards were conferred:

M.D.—†F. G. Bell, *O. H. Blacklay, J. F. Brown, J. Brown-Lester, L. H. Bryson, *W. E. Bullock, ‡H. M. Cargin, W. D. Chambers, N. A. Coward, J. Cram, ‡J. Crocket, G. H. Dart, S. B. Davis, ‡I. D. Dickson, J. Drummond, W. G. Evans, J. Findlay, †A. H. Firth, ‡R. G. Gordon, A. G. M'Pherson Grant, Satis Chandra Sen Gupta, †D. K. Henderson, ‡H. F. Holmden, T. H. Horrax, ‡A. J. G. Hunter, W. D. Kirkwood, †R. A. Krause, †W. R. Logan, D. H. C. Macarthur (Captain, R.A.M.C.), S. A. M'Clintock, F. B. Macdonald, ‡R. Macdonald, ‡G. M'Mullan, J. M. Macphail, N. F. Mann, B. B. Morgan, R. F. Mudie, ‡H. G. G. Nelson, †J. J. H. Nelson (Captain, I.M.S.), ‡H. Paterson, J. H. H. Pearson, ‡A. A. W. Petrie, †Kanta Prasad (Lieutenant-Colonel, I.M.S.), ‡Dorothy E. Pratt, R. Proudfoot, ‡G. Raffan, G. Richardson, ‡G. Y. Richardson, G. H. W. Robertson, *G. M. Robertson, ‡W. A. Shafto, †J. J. M'I. Shaw, J. I. Shepherd, E. W. Smerdon, H. F. Smith, †W. R. Smith, A. Stuart, B. C. Tennent, R. C. Walker, W. G. Waugh, *G. D. Whyte, †F. M. Willcox.

M.S.—‡K. Mackenzie, *A. P. Mitchell, ‡L. E. B. Ward.

M.B., CH.B.—§E. W. Adcock, W. R. Addis, Hira Singh Anand, R. P. Anderson, W. H. Armistead, F. C. K. Austin, J. I. Baëza, Tejnarain Bahadur, I. J. S. Balkin, W. Barclay, D. C. Barron, E. O. Beckley, A. Bremner, H. A. Brookes, F. R. Brown, R. M. Brown, D. Campbell, C. P. Carlsson, S. M'A. F. Cesari, T. W. J. Childs, G. W. Christie, T. W. Clarke, ‖A. Cowe, E. S. Craig, J. H. Cumming, Laura K. Davies, C. Dundee, A. J. Dunlop, ‖J. W. Edington, J. S. Elliot, Isabella Elphinston, K. D. Falconer, G. D. Ferguson, F. G. Foster, A. S. Fry, J. Gifford, A. C. Giles, A. Grant, §J. N. J. Hartley, H. B. L. Henderson, R. A. Hepple, S. Honeyman, J. H. Hood, §T. D. Inch, T. W. Jackson, Oo Kek Khaw, F. J. Kirkness, D. A. Laird, J. I. Lawson, R. B. Llewellyn, R. L. Lloyd, J. B. Low, G. H. Lunan, R. M'Adoo, Margaret N. MacCallum, A. E. P. M'Connell, D. M'Kelvey, ‖W. Mackenzie, Celia M. C. MacNeil, J. G. Marie, C. de C. Martin, D. Martin, G. E. Martin, R. Montgomery, W. K. Morrison, H. O'H. O'Neill, ‖W. Parker, ‖E. Percival, A. N. Pollock, D. Pottinger, §T. Pullar, G. Rankine, Khammamett Gopala Rao, J. W. van Reenen, D. S. Robertson, W. J. Robertson, C. D. Rogers, H. A. von Ronn, M. S. Ross, C. Scales, L. R. Sharples, P. M'L. Shiels, A. F. Sinclair, ‖R. W. Smith, E. T. A. Stedeford, J. W. Steel, Isabella Stenhouse, A. M. Stewart, F. G. Thatcher, W. St. C. Thwaites, Hira Lal Tikku, M. C. Turiansky, J. Walker, H. O. Washbourn, D. G. Watson, G. Williams, G. Wilson, H. W. Wilson.

D.T.M. AND HY.—A. D. Stewart, Capt. I.M.S.

D. PSYCH.—P. W. P. Bedford, W. Russell, L. H. Skene.

* Gold Medal for Thesis. † Highly commended for Thesis.
‡ Commended for Thesis. § First Class Honours.
‖ Second Class Honours.

On the same occasion the following scholarships and prizes were distributed:—Goodsir Memorial Fellowship: F. G. Bell. Ellis Prize in Physiology: W. E. Bullock. Gunning Prize in Physiology: Marjory Macnaughton. Fothergill Gold Medal in Therapeutics: J. G. Sharp. Chiene Medal in Surgery: L. E. Barrington-Ward. Ettles Scholarship: J. N. J. Hartley. Allan Fellowship: E. W. Adcock. Freeland Barbour Fellowship: T. D. Inch. M'Cosh Bursary: D. C. Barron. Murchison Memorial Scholarship: A. W. S. Sichel. Beaney Prize: J. W. Edington. Mouat Scholarship: D. Martin. Conan Doyle Prize: J. W. van Reenen. Annandale Gold Medal: J. N. J. Hartley. Buchanan Scholarship: J. N. J. Hartley. James Scott Scholarship: T. Pullar. Dorothy Gilfillan Memorial Prize: Isabella Stenhouse. Wellcome Medals in the History of Medicine: Gold Medal, T. Pullar; Silver Medal, K. F. Sonntag. Pattison Prize in Clinical Surgery: J. M. Watt. Cunningham Memorial Medal in Anatomy: J. L. Owen. Whiteside Bruce Bursary: R. Mailer.

The following candidates have been approved at the examinations indicated:

SECOND M.B. (*Physiology*).—G. G. Allan, C. B. C. Anderson, C. H. Barry, D. L. Baxter, J. Bennet, J. C. L. Brown, R. B. Buchanan, A. J. Caird, R. D. Cameron, E. Chapelle, F. W. Clark, T. F. Corkill, W. F. Craig, D. C. Duff, H. B. Dykes, J. J. B. Edmond, E. C. Fahmy, A. M. Ferrie, M. Foster, J. J. Gasperine, N. Gibbin, A. K. Gibson, G. W. Grant, T. F. Grant, J. A. C. Guy, N. K. Henderson, F. Holmes, W. L. Hunter, R. L. Impey, E. Jamiesone, T. Janakiramiah, J. M. Johnston, J. B. Kirk, J. M'Garrity, I. Mackenzie, J. A. Mackenzie, A. R. C. M'Kerrow, N. Macleod, D. A. Macrae, J. O. Marais, A. Marly, W. R. Mathewson, J. de V. Mering, F. H. van der Merwe, G. H. Middleton, C. Milne, H. S. Moore, J. S. Munro, J. L. Owen, M. S. N. Panikkar, G. A. Paris, A. M. Paterson, D. H. Paterson, A. Prentice, J. C. Preston, E. G. Pyott, A. Robertson, B. J. Ryrie, J. G. R. Scarff, S. N. Seal, B. H. Simon, G. H. Sinclair, J. M. Smellie, T. J. Sumner, D. R. Thapar, R. Vassie, G. A. Velluot, Gladys Ward, Gladys R. M. V. Williamson.

THIRD M.B. (*Materia Medica*).—R. C. Aitchison, M. H. Alikhan, F. A. Anderson, J. M. Anderson, F. W. W. Baillie, T. H. S. Bell, E. J. Blair, J. Brown, W. M. Christie, I. A. Clarke, W. A. Coates, W. A. Cochrane, J. R. Crolius, J. Dick, C. L. Dold, F. J. N. Fook, H. J. Foote, A. W. Forrest, E. Fullerton, E. L. Galgut, D. C. Graham, H. A. Hewat, Helen G. Hewat, R. M. Hume, J. E. Hurworth, E. B. Israel, D. H. Jones, S. A. Kuny, L. Lappin, J. E. Larché, N. B. Laughton, R. Lawson, J. Loftus, J. G. Louden, E. W. Louw, J. E. McCartney, I. M'Dowall, J. R. S. Mackay, M. M'Kerrow, D. Malloch, D. J. Max, J. W. Potter, R. Power, J. W. G. H. Riddel, A. C. Shaw, C. G. Skinner, J. M. Smith, S. H. Stewart, R. J. Tait, B. P. Varma, J. Walker, Chik H. Wan, J. W. Watthews, J. A. C. Williams, C. J. Young. (*Pathology*).—R. C. Aitchison, J. M. Anderson, J. S. Armstrong, F. W. W. Baillie, T. Y. Barkley, R. B. Boston, J. Brown, H. J. Bruwer, W. K. Chalmers, J. E. Chow, A. G. Clark, T. L. Clarke, I. A. Clarke, W. A. Cochrane, C. H. H. Coetzee, J. Dale, J. Dick, D. Dunlop, H. F. Ferguson, G. W. M. Findlay, F. J. N. Fook, E. Fullerton, B. B. Gadgil, W. Goldie, F. M. Halley, J. A. Henderson, J. Hepburn, R. M. Hume, J. E. Hurworth, E. B. Israel, O. D. Jarvis, G. G. S. Johnston, F. J. C. Johnstone, C. W. S. D. Jones, S. J. Kuny, J. E. Larché, N. B. Laughton, E. Law, J. Lawson, R. Lawson, D. Lennox, H. Lewis, A. J. E. G. Lim, H. H. Lim, J. G. Louden, J. E. M'Carthey, G. A. Macdonald, I. M'Dowall, G. C. M'Ewan, J. W. Malcolm, D. Malloch, R. F. T. Newbery, R. N. Phease, J. W. Potter, O. D. Price, W. J. Purdie, N. L. Reis, J. W. G. H. Riddel, J. W. Riddoch, J. Rodger, A. J. D. Rowan, R. B. Stewart, S. H. Stewart, T. M. J. Stewart, A. J. Taylor, F. O. Taylor, W. E. Thompson, A. R. Thomson, G. M. Torrance, J. Walker, J. W. Watthews, L. H. Werden, J. M. Wishart, Margaret K. J. Wright, C. J. Young.

## UNIVERSITY OF ST. ANDREWS.

AT a meeting of the University Court on July 12th, Dr. W. B. Dow was re-elected an assessor of the University General Council on the Court for a period of four years from June 28th.

## QUEEN'S UNIVERSITY, BELFAST.

THE following candidates have been approved at the examinations indicated:

FIRST M.B. (*Chemistry*).—Jane Copes, G. J. Crawford, W. Gilmore, W. Graham, S. M. Kirk, D. J. Loughran, J. E. Rea, S. J. Smyth, Maud C. Welsh, F. P. Woods. (*Physics*).—J. C. Carson, G. J. Crawford, R. Hall, Olga R. I. Love, D. J. Loughran, S. M'Kee, R. G. Meyer, Annie M. Orr, S. J. Smyth, F. P. Woods. (*Zoology*).—J. F. Ainley, D. D. Anderson, Olive M. Anderson, Annie E. E. Beattie, T. M. Boyd, Janie Clarke, J. W. C. Colquhoun, Jane Copes, G. J. Crawford, Margaret Crawford, W. Cupples, Dorothy I. Dobbin, J. Fegan, J. W. Gaston, W. Gilmore, C. Graham, W. Graham, F. Hopkins, T. F. Ingram, D. L. Ireland, J. Lascelles, S. Lees, Olga R. I. Love, D. J. Loughran, J. C. Loughridge, J. M'Cormack, S. M'Kee, A. M'D. M'Mullan, P. Macarthur, R. G. Meyer, J. P. O'Kane, H. J. O'Prey, J. E. Rea, S. J. Smyth, M. H. Turnbull, Maud C. Welsh, H. W. Wild, C. J. A. Wcodside. (*Botany*).—J. F. Ainley, D. D. Anderson, Olive M. Anderson, Annie E. E. Beattie, Janie Clarke, J. W. C. Colquhoun, Jane Copes, G. J. Crawford, Margaret Crawford, W. Cupples, Dorothy I. Dobbin, J. Fegan, J. W. Gaston, W. Gilmore, C. Graham, W. Graham, R. Hall, F. Hopkins, D. L. Ireland, J. Lascelles, S. Lees, Olga R. I. Love, D. J. Loughran, J. C. Loughridge, H. H. M'Clelland, J. M'Cormack, A. M'D. M'Mullan, P. J. Murnane, J. P. O'Kane, H. J. O'Prey, Annie M. Orr, S. J. Smyth, M. H. Turnbull, H. W. Wild, C. J. A. Woodside.

SECOND M.B. (*Anatomy*).—W. L. Agnew, W. Bryars, A. G. Campbell, G. Chesney, *A. C. Dickey, S. J. W. Donald, Grace M. English, H. E. Hall, B. J. H. Hogg, L. Jefferson, Arabella C. Kirker, N. M'Cullough, *J. P. M'Ginley, B. W. M'Kinney, M. M'Menamin, F. M'Sorley, P. J. M'Sorley, *H. E. Magee, J. J. Marner, D. Mitchell, Elizabeth M. Moore, H. T. O'Neill, Margaret S. Purce, R. J. Rae, W. Saunderson, R. L. Sinclair, J. P. Smyth, *Mary G. Thompson, T. R. S. Thompson, J. H. Vance, D. R. Wheeler, *C. A. Whitfield, F. H. Whyte. (*Physiology*).—W. L. Agnew, W. Bryars, A. G. Campbell, G. Chesney, A. C. Dickey, S. J. W. Donald, Grace M. English, B. J. H. Hogg, Arabella C. Kirker, N. M'Cullough, J. P. M'Ginley, B. W. M'Kinney, M. M'Menamin, F. M'Sorley, P. J. M'Sorley, H. E. Magee, J. J. Marner, D. Mitchell,

Elizabeth M. Moore, Margaret S. Purce, R. J. Rea, W. Saunderson, R. L. Sinclair, J. P. Smyth, Mary G. Thompson, T. R. S. Thompson, J. H. Vance, D. R. Wheeler, C. A. Whitfield, F. H. Whyte.

THIRD M.B. (*Materia Medica and Pathology*).—J. B. Alexander, E. G. B. Calvert, W. K. Campbell, R. Condy, W. W. Dickson, T. W. E. Elliott, Mary A. Gallagher, T. M'Clurkin, W. T. M'Curry, R. G. M'Elney, T. Milling, A. Porter, R. L. Rea, F. A. E. Silcock, W. A. Thompson, Elizabeth S. Walker, R. F. Walker, R. H. Wilson. (*Hygiene and Medical Jurisprudence*).—J. B. Alexander, A. W. Bourke, E. G. B. Calvert, P. Clarke, D. M. Clements, J. Cullenan, C. F. Davey, T. W. E. Elliott, Mary A. Gallagher, P. Kane, T. M'Clurkin, W. C. M'Cullough, W. T. M'Curry, R. G. M'Elney, J. M'Kay, H. M'Nally, J. R. M. Mackenzie, Sylvia Marsh, J. F. Meenan, T. Milling, F. P. Montgomery, W. N. Montgomery, A. Porter, R. L. Rea, W. Russell, F. A. E. Silcock, H. S. Smith, J. M. Smith, W. A. Thompson, Elizabeth S. Walker, D. K. Watterson, R. H. Wilson.

FINAL M.B., B.CH., B.A.O.—*†N. Beattie, *†W. A. L. Dunlop, *†T. W. G. Hogg, *†T. Walker, J. S. Bellas, D. Calwell, J. F. Craig, H. Emerson, H. P. Hall, H. M. Jackson, G. D. Latimer, J. B. Lyle, W. J. M'Cracken, W. M. H. M'Cullagh, J. J. H. Mitchell, J. Porter, H. A. Skillen, W. Speedy, W. Tyrrell, T. H. Wilson, S. J. Yeates.

M.D.—G. Cooper, J. G. Johnson, G. E. A. Mitchell.

M.CH.—A. Fullerton.

D.P.H.—W. K. Calwell, F. W. Craig, T. F. S. Fulton, D. G. Gray, R. M'Candless, W. B. Purdon, J. J. Robb, W. B. Stevenson, R. S. Taggart, E. Thorpe.

*Recommended for a scholarship. †Second class honours.

## UNIVERSITY OF BRISTOL.

THE following candidates have been approved at the examination indicated:

SECOND M.B., CH.B.—H. Archer, O. C. M. Davis.

## VICTORIA UNIVERSITY OF MANCHESTER.

*Appointment.*

DR. J. C. S. DOUGLAS, who is at present Lecturer on Pathology and Bacteriology at the University of Birmingham, has been appointed Lecturer in Pathology to the Victoria University of Manchester; and Drs. R. T. Williamson, E. N. Cunliffe, and A. Ramsbottom, all of whom are on the staff of the Royal Infirmary, have been appointed Lecturers on Clinical Medicine.

## ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A QUARTERLY council was held on July 10th, Sir Rickman J. Godlee, Bart., President, in the chair.

*Election into the Council.*

The President reported the results of the election of four Fellows into the Council of the College.

*President and Vice-Presidents.*

Sir Rickman J. Godlee was re-elected President, and Mr. G. H. Makins, C.B., and Sir Frederic Eve were elected Vice-Presidents.

*The late Sir Jonathan Hutchinson.*

The Council passed the following vote of condolence:

That the Council hereby express their deep regret at the death of Sir Jonathan Hutchinson, and their sincere sympathy with the members of his family in their bereavement. The Council remember with gratitude the many services rendered by Sir Jonathan Hutchinson to the College, as its President, and as a member of the Council and of the Court of Examiners, and do also record their appreciation of his untiring industry, the extent and accuracy of his observations, his eminence in many of the special departments of surgery, and the important discoveries which will always be associated with his name. The Council feel that the College has lost one of its most illustrious Fellows and one for whom the highest regard was entertained not only by Fellows and Members of the College, but by the medical profession in this country and in every part of the civilized world.

... ... ...

... ...*The late Mr. Alfred Willett.*

The following vote of condolence was passed by the Council:

That the Council hereby express their deep regret at the death of Mr. Alfred Willett, and tender their sincere sympathy to Mrs. Willett and the other members of the family in their bereavement. That the Council do also record their appreciation of the many services rendered by Mr. Willett to the College in the conscientious discharge of the duties which devolved upon him as a vice-president and member of the Council. The Council have not forgotten the respect and affection which his sterling character and genial presence inspired.

*College Solicitor.*

Mr. E. Hugh N. Wilde was appointed Solicitor to the College.

*Examiners.*

Mr. W. G. Spencer was elected to the Board of Examiners in Dental Surgery, in the vacancy occasioned by the retirement of Mr. W. F. Haslam. The Council accepted with regret the resignation of Professor Gotch as Examiner in Physiology for the Fellowship.

*Imperial Cancer Research Fund.*

Sir Frederic Eve, Sir Alfred Pearce Gould, and Mr. R. Clement Lucas were appointed members of the Executive Committee of the Imperial Cancer Research Fund.

*Queen Victoria Jubilee Institute for Nurses.*

Mr. R. Clement Lucas was appointed a representative of the College on the Council of the Queen Victoria's Jubilee Institute for Nurses.

*Appointment of Professors and Lecturers.*

The following appointments were made for the ensuing year:

*Hunterian Professors.*—Arthur Keith, Hastings Gilford, Charles Mansell Moullin, Ernest William Hey Groves, Arthur Rendle Short, Harold Beckwith Whitehouse.

*Arris and Gale Lecturers.*—Frederic Wood Jones (two lectures), David Waterston (one lecture).

*Erasmus Wilson Lecturer.*—Samuel George Shattock.

*Arnott Demonstrator.*—Arthur Keith.

*Odontological Demonstrator.*—James Frank Colyer.

# Obituary.

## FRANCIS GOTCH, D.Sc., F.R.S.,

WAYNFLETE PROFESSOR OF PHYSIOLOGY IN THE UNIVERSITY OF OXFORD.

THE announcement of the death of Professor Francis Gotch, Waynflete Professor of Physiology in the University of Oxford, will be received with profound regret by every one who knew him, and especially by the numerous students who came under his influence in Liverpool and in Oxford. The death occurred at the residence of his brother-in-law, Sir Arthur Whitelegge, in Kensington, after an illness extending over several months.

Francis Gotch was born in 1853, the only son of the Rev. Dr. Gotch, of Liverpool, who was one of the revisers of the Old Testament. He was educated at Amersham Hall School and University College, London, where he entered first in the Faculty of Arts and took the degree of B.A. in 1873; two years later after working in the Faculty of Science he became B.Sc.Lond., and thereafter entered the Medical Faculty, where he distinguished himself as a student of original mind and great ability. During his career at the University College he suffered from ill health and spent some time abroad, but he obtained the M.R.C.S. in 1881, and, devoting himself to physiology, was appointed Sharpey physiological scholar in University College, under Professor Burdon-Sanderson. He assisted Sanderson in many of his experiments, especially in those with regard to muscles and nerve reactions. When in 1883 Burdon-Sanderson was appointed to the newly-constituted Waynflete Chair of Physiology at Oxford, Gotch became his demonstrator, and greatly assisted in organizing the new department. He continued to work in co-operation with his elder, and also began to conduct independent researches, the best known being those relating to electro-motive properties of electrical organ of *Torpedo marmorata*, and to other researches in connexion with the functions of the nervous system, especially of the nerves. In 1891 he was appointed Holt Professor of Physiology in the University of Liverpool, and again proved himself a successful organizer, as well as a brilliant and inspiring teacher. In 1895, when Burdon-Sanderson was appointed Regius Professor of Medicine in Oxford, Gotch succeeded him in the chair of physiology, and in addition to teaching and inspiring his pupils to make original researches, continued his own investigations into the phenomena of excitable tissues, especially of muscle, nerve, and the retina. His papers were published in the *Journal of Physiology*, in the *Philosophic Transactions*, and in the *Proceedings of the Royal Society*, before which in 1891 he delivered the Croonian lecture on the mammalian nervous system. He was elected a Fellow of the Royal Society in 1892, and served on the Council in 1904–1906. In Oxford he threw himself into the life of the university, and was an active member of the Hebdomanal Council and of many boards and committees. He took over from his predecessor a well-equipped laboratory, and himself very largely increased its facilities, developing a series of departments, including that of physiological chemistry under Drs. Ramsden and Vernon, of histology under Dr. Scott, of respiratory physiology under Drs. Haldane and Douglas, and of experimental psychology under Dr. McDougall. He was a Fellow of Magdalen College, and took an active part in the administration of its affairs. He became M.A. of Oxford in 1896, and D.Sc. in 1901. He also received the honorary degrees of D.Sc. from the University of Liverpool in 1907, and that of LL.D. St. Andrews in 1911.

He was not only a man of extraordinary scientific ability, but had a keen artistic taste, with a wide knowledge and appreciation of art. He married in 1887 the daughter of Mr. J. C. Horsley, R.A., and sister of Sir Victor Horsley; he is survived by her and by one son and three daughters.

He lived a full life, and keenly enjoyed the opportunities he found for doing good work for the cause of medical education, and for the advancement of science. Those who knew him in early days at University College will recall the delight with which he recognized that circumstances were so shaping themselves that he could give his life to physiology. He was ever ready to make new friends, and the charm of his frank nature drew many about him, but he never forgot an old one. To them he was always the same, and to many the world will seem much poorer, because they may not hope to hear again his cheery greeting, or come once more under the influence of his contagious energy and enthusiasm.

## ALGERNON THOMAS BRISTOW, M.D.,

SURGEON TO KING'S COUNTY HOSPITAL AND TO ST. JOHN'S AND THE LONG ISLAND COLLEGE HOSPITAL, BROOKLYN; EDITOR OF THE NEW YORK "STATE JOURNAL OF MEDICINE."

In the recent death of Dr. Bristow from septicaemia, contracted from the prick of a needle while operating on a septic patient, America has lost a brilliant surgeon and the medical profession one of her most talented sons.

Dr. Bristow was born in England on November 29th, 1850, and migrated with his parents to America when 2 years of age. Though his early recollections of this country must necessarily have been of the slightest, he inherited a love of his motherland which he never hesitated to display in his more mature years. He had great sympathy with the medical profession in this country, and showed a lively interest in the fight of the British Medical Association against the Insurance Bill and Act. On this subject he had many communications with the President of the Association, and he thought that there were many points in the constitution and work of the Association which the American Medical Association might well emulate. In a personal letter to the President of the British Medical Association, dated December 30th, 1912, he stated—

> In a few days you will receive from Dr. Simmons, of the American Medical Association, an invitation to the British Medical Association to hold a joint meeting with us in 1915. I am the Chairman of the Committee which was appointed at the last meeting of the American Medical Association, to confer with the British Medical Association on the feasibility of such a project, and I trust that your Council will look favourably on such a proposition. In these days of *Studien Reisen* it seems that it might be possible and profitable for the medical associations of the two great English-speaking races to come together. We can learn much from you, and perhaps you can take a leaf or two out of our book. At any rate, as the originator of this project, I thought it worth considering, and hope that it may be carried out to our mutual benefit and better understanding.

The invitation has been received, the matter is under consideration, and it is now well to have this opinion of the originator on record, though he has passed beyond the realm of hope that his desire may be realized.

Dr. Bristow was a many-sided man; he was not only a brilliant surgeon, but an intellectual of rare capacity, and his pen was often as sharp as the edge of his knife. He is spoken of in the highest terms of appreciation and affection by his colleagues, who recognized his sterling merit and his unselfish devotion to the cause of truth and progress. He hated sham, and his penetrating intuition enabled him readily to separate the wheat from the chaff. He was always ready to lend a helping hand to those in distress, and the highest and noblest aims of the medical profession ever engaged his earnest solicitude. Dr. W. F. Campbell says of him:

> It may seem a prodigal waste that such a life at the full realization of its usefulness should be given a ransom that others less needed might survive. And yet he died as all true men would die—in the firing line with his face to the front. Where duty called he counted no cost and dreaded nought but cowardice. He realized that there was no great achievement without a great adventure, and no great adventure without a challenge to fate. He was a great teacher because he had a great passion for truth; he was a great surgeon because he had a passion for perfection. He was a scholar because he never left school. He was always the student, ever graduating not out but up, from one class to a higher class; recognizing in the larger relationships that life is the school, work the curriculum, character the diploma. His editorials showed depth of thought and beauty of diction. They scintillated with satire, and an aptness of quotation which showed an intimate acquaintance with the masters of literature. There was sometimes heat but always light. There was always breadth but never shallowness. Through his leadership we have gained a clearer vision and a larger outlook, for he trod the higher slopes. He had no patience with the cheap, the mediocre, the superficial, the bizarre.

We have, perhaps, quoted enough from the appreciation by Dr. Campbell, who knew Dr. Bristow intimately, to show the outstanding character of the man—a man whom the medical profession can ill afford to lose, but such is one of the problems of life. In the midst of death we are in life, and no doubt there are many other men of the same genuine stamp who will carry on the great work which Dr. Bristow initiated. He has left a wife and two daughters to mourn his sad and untimely end, and to them our sympathy goes out for the loss of a great and good man. To again quote Dr. Campbell: "At his own fireside, at the family altar, whereon burned with steady glow his heart's purest affection: there amid the peace that passeth understanding his simple and great soul found its native clime; there in the family circle we often sat charmed by the beauty of his mind, which never lost its power of leading, as by an unspoken invocation, 'to a green field, ever kept fresh by a living fountain.'"

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Dr. C. G. Hällsten, some time professor of anatomy and physiology in the University of Helsingfors; Dr. Max Kassovitz, director of the first public sick children's institute in Vienna, and extraordinary professor of children's diseases; Dr. Motais, professor of clinical ophthalmology in the medical school of Angers; Dr. George H. Powers, for many years professor of diseases of the eye, ear, nose, and throat in Toland Medical College, and afterwards in the medical department of the University of California, said to have been the first doctor who specialized in eye and ear diseases in San Francisco, aged 73; and Surgeon-General D. A. V. Vogl, formerly chief of the medical department of the medical staff of the Bavarian army.

# Public Health AND POOR LAW MEDICAL SERVICES.

## TUBERCULOUS CATTLE.

In reply to Mr. Field, the President of the Board of Agriculture has given the following particulars with regard to the number of animals dealt with during the period ending June 24th by the local authorities in England under the Tuberculosis Order, 1913:

Number of animals notified to local authorities in England under the Tuberculosis Order, 1913, from May 1st to June 24th, 1913:

| | |
|---|---|
| (*a*) By owners ... ... ... ... ... | 1,210 |
| (*b*) By veterinary surgeons ... ... ... | 349 |
| (*c*) From other sources ... ... ... ... | 188 |
| Total ... ... ... ... ... | 1,747 |

Approximately 95 per cent. were females.

Number of animals slaughtered by local authorities, for which compensation has been paid or is due, 965.

| | | | |
|---|---|---|---|
| Total of valuations: | | | |
| On the basis of (*a*) the animals being affected | £4,815 | 4 | 6 |
| (*b*) the animals not being affected ... | 8,725 | 7 | 2 |
| Total of compensation paid or due to owners | 2,215 | 4 | 8 |
| Net cost of compensation after deduction of salvage ... ... ... ... | 1,306 | 16 | 4 |

Statistics of the number of animals slaughtered under the provisions of the Order are printed monthly in the *Gazette*.

## REPORTS OF MEDICAL OFFICERS OF HEALTH.

*St. Austell Rural District.*—The estimated population at the middle of 1912 was 33,115. The net birth-rate was 21.4 and the net death-rate 12.2 per 1,000. The infant mortality-rate was equal to 77 per 1,000 births. The medical officer of health, Dr. A. T. Nankivell, has only been in office since June, 1912, but he appears already to have organized the work of the

d strict on a sound basis and to have carried out some excellent work. Of special value is the section of his report dealing with pauperism and poverty, a subject which might well be discussed more frequently in public health reports. The district is in a similar plight to other rural districts as regards the unsatisfactory condition of the houses occupied by the working classes; many have been patched and repaired in order to make them less unfit to live in, but they have not been closed and pulled down as required by the Housing, Town Planning, etc., Act, 1909, because already there is a house famine. After the presentation of a detailed report on the needs of various parts of the district by Dr. Nankivell, the district council gave some consideration to the question which we trust will bear fruit at an early date. It is unsatisfactory to find in a district the size of St. Austell that there is no isolation accommodation available for infectious diseases. During 1912 there were notified 45 cases of scarlet fever and 10 of diphtheria, and during the past ten years there has been a yearly average of these two diseases of 94 and 18 respectively. A question of considerable importance which at the present time is causing a great deal of concern among medical officers of health in large rural districts is referred to in the report. The Medical Officer of Health of St. Austell Rural District has to do the whole of his clerical work and to pay all his travelling expenses about the district. During the six months that Dr. Nankivell has held office he has travelled 2,700 miles, and has now found it necessary to purchase a motor car, so that probably during 1913 he will spend more than one-fourth of his salary in travelling expenses without allowing for the original cost of the car.

# Medical News.

THE Radium Institute, Riding House Street, founded by Lord Iveagh and Sir Ernest Cassel, will be closed for the treatment of cases from Monday, August 4th, to Saturday, August 30th, inclusive.

THE personal estate of the late Dr. Robert Browne, Superintendent Medical Officer of Health for the Rathmines District of Dublin, has been declared at a value of £26,874.

WE are asked to state that the National Medical Guild, described as a trade union for medical practitioners with branches in all parts of the United Kingdom, will have temporary offices at 13, Old Steine, Brighton, from July 18th to 26th.

THE Carnegie Foundation has awarded its gold medal to Professor Bergonié of Bordeaux, in recognition of his numerous and valuable scientific researches. It is well known that his studies on the *x* rays have cost him dear, but every one will be glad to learn that his vigorous constitution has enabled him to get the better of his injuries.

ON July 15th the new buildings of the Central London Ophthalmic Hospital in Judd Street were opened by the Duchess of Albany. The buildings consist of five floors and a basement, and provide for forty beds, in addition to an out-patient department, two operating theatres, bacteriological and pathological departments, an *x*-ray room, and a museum. There is also a common room for students, a library, quarters for the resident staff and clinical assistants, and on the top floor quarters for the nursing staff. So far as building expenditure is concerned, the institution is free of debt, but funds are still required for equipment, and at present it is not intended to utilize more than twenty-five beds.

KING'S COLLEGE HOSPITAL, which has been reducing the amount of its work for some time past, discharged the last of its patients on Monday, the doors being then formally closed. They were reopened, however, in the evening for the holding of a supper party, which was followed by a concert and attended by many old residents and other King's College men. Those present included Professor Urban Pritchard, who was in the chair, Sir Watson Cheyne, Professor N. I. C. Tirard, Sir David Ferrier, Sir StClair Thomson, Mr. Boyce Barrow, and Dr. John Walters of Reigate, who was house-surgeon at the hospital as far back as 1857. The proceedings concluded with the singing of the hospital chorus and "Auld Lang Syne," and "Mary," who has now played the part of mother to the residents for over twenty years, was not forgotten. It is anticipated that the new building will be ready for work by October 1st, and meantime the premises are to be inspected by the King and Queen next week.

AT the annual meeting of the American Association for Cancer Research held on May 5th, 1913, the following resolutions (the report of the Committee on Statistics and Public Education) were unanimously adopted: "(1) The present instruction of medical students in the symptoms and early diagnosis of cancer is seriously deficient; (2) the medical curriculum should include special lectures in the clinical departments dealing specifically with this subject; (3) the universities should provide competent lecturers in this subject to address the local medical societies; (4) the associate members of the association should be urged to take up the question of the proper methods of approaching the public on the subject of cancer; (5) the activities of this association should at present be chiefly confined to the education of the medical profession; (6) this resolution shall be sent to the deans of the medical schools and the secretaries of the State medical societies in the United States and published in the medical press."

WALKER (*Philippine Journal of Science*, vol. viii, Sec. B, No. 1, February, 1913) describes under the heading "The qualitative determination of the balantidicidal activity of certain drugs and chemicals as a basis for treatment of infections with *Balantidium coli*," some experimental work he recently conducted in the Philippine Islands. Drugs such as the compounds of arsenic and antimony, the aniline dyes, ipecacuanha and its alkaloid emetine, and quinine were found to possess little or no balantidicidal value, but, on the other hand, the salts of the heavy metals, especially mercury and silver, proved useful. Quantitative tests demonstrated that the organic compounds of silver which are not precipitated by albumen, or, if precipitated, form soluble compounds, possess a balantidicidal activity as great, in proportion to the amount of silver contained, as silver nitrate. How far these results will be applicable in practice can only be determined by actual clinical experience.

THE After-Care Association, whose objects are to assist cases discharged recovered from asylums for the insane, held a meeting on July 4th at All Saints' Vicarage, Highgate, by the kind invitation of the Vicar and Mrs. Hawkins. The chair was taken by the Hon. John Mansfield (Lord Chancellor's Visitor in Lunacy). The meeting was addressed by Mr. Stanley Keith, Mrs. Sikes, and Mr. Thornhill Roxby. There was a large attendance, and several new members were enrolled. Another meeting was held on July 8th at Cane Hill, by the kind invitation of Sir James and Lady Moody. The chair was taken by Sir James Moody, and the meeting was addressed by Sir George Savage, M.D., Dr. Percy Smith, and Mr. Thornhill Roxby. There was again a very good attendance, much interest being shown in the work of the association, and a useful addition to the funds obtained. A vote of thanks to the host and hostess was proposed by Dr. Campbell and seconded by Dr. Pasmore, to which the Chairman suitably replied. This charity is the only one of the kind in Great Britain, and assists cases from all parts of the country.

A QUARTERLY court of the directors of the Society for Relief of Widows and Orphans of Medical Men (11, Chandos Street, Cavendish Square, W.) was held on July 9th. Sir Thos. Boor Crosby, President, was in the chair, and fourteen directors were present. The deaths of Mr. A. Willett, vice-president, and Mr. L. Archer, director, was reported. Two gentlemen were elected members of the society. The sum of £1,333 was voted for the payment of the half-yearly grants to the widows and orphans on the books of the society. Since the last court three widows had died; one, whose husband had paid in subscriptions £26 5s., had been on the funds since 1885, and had received from the society £1,540. The Acting Treasurer reported that the total amount received from the estate of the late Sir James Brickwell was £37,250, bringing in an income of £1,325 10s. per annum. A scheme for utilizing this was submitted to the court, and was adjourned to the October court for further discussion. A legacy of £250 had also been received from the executors of the late Mr. Windsor of Manchester. Membership is open to any registered medical practitioner who at the time of his election is resident within a twenty-two mile radius of Charing Cross. The annual subscription is 2 guineas. Special terms for life membership vary with the age of the applicant. Full particulars may be obtained from the secretary at the offices of the society, 11, Chandos Street, Cavendish Square, W. Relief is only granted to the widows or orphans of deceased members, and the secretary is constantly receiving letters from widows of medical men who have been left practically penniless, asking for relief, but this has to be refused as their husbands had not been members of the society.

# Letters, Notes, and Answers.

Correspondents who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* British Medical Journal *alone unless the contrary be stated.*

Manuscripts forwarded to the Office of this Journal cannot under any Circumstances be returned.

Correspondents not answered are requested to look at the Notices to Correspondents of the following week.

Authors desiring reprints of their articles published in the British Medical Journal are requested to communicate with the Office, 429, Strand, W.C., on receipt of proof.

Telegraphic Address.—The telegraphic address of the EDITOR of the British Medical Journal is *Aitiology, Westrand, London.* The telegraphic address of the British Medical Journal is *Articulate, Westrand, London.*

Telephone (National):—
2631, Gerrard, EDITOR, BRITISH MEDICAL JOURNAL.
2630, Gerrard, BRITISH MEDICAL ASSOCIATION.
2634, Gerrard, MEDICAL SECRETARY.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* British Medical Journal *are devoted will be found under their respective headings.*

## QUERIES.

Dr. Percy E. Adams (The Infirmary, Isleworth, W.) desires a home, sanatorium, or hospital for paying patients, preferably in the south or east of England, and near the sea, for an infant of 11 months who underwent tracheotomy some months ago. It has not been possible to dispense with the tube, and the general health is unsatisfactory. Constant medical supervision is necessary, and the services of some one with special experience of laryngeal work should be available if required.

### The Cuprase Treatment of Cancer.

H. F. W. would be glad to hear the experience of those who have tried the cuprase (copper colloid) treatment of cancer recommended by Dr. Gaube du Gers. What are the results, and are the injections painful? He also asks for information as to the percentages of recurrences after operation for cancer of the breast, and as to the average lapse of time between the performance of this operation and the occurrence (*a*) of a relapse, (*b*) of death.

### Sanatoriums.

A. H. (Liverpool) inquires as to the superficial area required per patient in a tuberculosis sanatorium of about 250 beds. Also as to the cubical area per patient in the same, and as to the number of beds admissible in any one ward.

*** The number and variety of tuberculosis sanatoriums at home and abroad is now so large, and the arrangements for open-air treatment so complete in most of them, that any hard-and-fast dimensions have no longer the significance that they had in former days when tuberculosis was treated behind closed windows. Only an average, therefore, can be taken, and about 150 sq. ft. may be regarded as representing the usual allowance for each patient, the cubical content being not less than 1,700 cub. ft. In all modern sanatoriums the system of single bedrooms is adopted, except where economic conditions have to be observed, but all such rooms are made to open directly on to a common balcony, so that the bed may be moved nearer to, or further from, or into the open air as the weather may permit. Where such provision exists for the free entry and exit of air, the exact dimensions of the sleeping place are of minor importance. Double-bedded rooms and small wards of 6 to 10 beds may be necessary on economic grounds, but should certainly be avoided if possible. It cannot be denied that patients treated in wards of 15 or 20 beds may often obtain as great benefit as others treated in single wards, but the single room with free access to a common balcony has become the recognized arrangement in all modern sanatoriums. Our correspondent will find much information on the subject in *Sanatoria for Consumptives*, by Dr. F. R. Walters, published by Swan Sonnenschein and Co.

### Duties of Ship Surgeons.

Marine desires to know of any small handy work published suitable for reference for ship surgeons. Also what is the general daily routine duty of a surgeon on a liner, and has he any special duty *re* embarking and disembarking passengers.

*** Our correspondent might consult *The Ship Surgeon's Handbook*, by A. V. Elder, M.R.C.S., L.R.C.P., second edition (London: Baillière, Tindall, and Cox, 1911, price 5s.), and *Hints to Ship Surgeons*, by J. F. Elliott, L.R.C.S., L.R.C.P. Ire. (London: J. Bale, Sons, and Danielsson, 1908, price 2s.). A ship surgeon may be called upon to do a major operation at very short notice and under difficult conditions. The daily routine at sea includes consultations morning and evening, and at 11 a.m. the daily inspection of the ship with the chief officers. A rough diary or log is kept from which a report is made at the end of the voyage of those of the crew certified to be unfit for duty; especial care must be taken with regard to the particulars of injuries due to accident, which may involve actions at law. Some captains require a daily report and other little attentions. On joining the ship the surgeon should immediately report himself to the captain. As to embarking and disembarking passengers, usually the surgeon has little to do except with steerage passengers, and that varies with ports, each port having its own regulations. For instance, in the ports of the Caribbean Sea at present trachoma is especially tabooed by the U.S.A. authorities. At some of the ports there are a couple of hundred "deckers," chiefly negroes, to examine before they come on board, all doubtful cases being rejected. But saloon passengers from infected areas (plague, etc.) have to be kept under observation. Probably our correspondent is aware that every ship has to get pratique before it enters port, and it is the duty of the surgeon to present the ship's papers and his bill of health to the medical officer of the port, who usually comes on board, and also to inform the commander when the ship is clear, so that disembarkation can proceed. There are numerous rules and regulations on the duties of the surgeon in the *Guard Book*, which can be consulted should any difference arise. It is always well to have a clear understanding as to duties and privileges before "signing on."

## ANSWERS.

H. A. C. writes in reply to "C.," who asked a question recently about a case of rheumatism in the shoulder. The substance of his reply is that he himself submitted to treatment by ionization for fibrositis of the neck, but suffered from two severe burns, which took eight weeks to heal.

## LETTERS, NOTES, ETC.

### Papyraceous Fetus Presenting at a Nearly Full Term Labour.

Dr. A. Fergus Hewat, from whom a memorandum under this title was published last week (p. 71), desires to express his indebtedness to Dr. Hastings Tweedy, past-Master of the Rotunda Hospital, Dublin, for his permission to publish the case. The acknowledgement was omitted last week owing to delay in receipt of a proof.

### Arms of Dr. John Caius.

Dr. Clippingdale (London, W.) writes: The very excellent and almost complete account, in last week's Journal, of John Caius omits the doctor's coat-of-arms, which, as a good example of ancient medical heraldry, seems worth recording. The coat is thus described in Burke's *General Armoury*: ". . . or, semée of flowers, gentle, in the middle of the chief, a sea green resting upon the heads of two serpents, in pale, their tails knit together, all proper colours, resting upon a square marble stone, vert. *Crest:* A dove, argent, beaked and membered, gules, holding in his beak by the stalk, a flower, gentle, stalked vert." The emblems of the healing art in this coat are obvious.

### Mental Deficiency Bill.

Mr. F. Douglas Turner (Secretary, Royal Eastern Counties Institution for Idiots, Imbeciles, and the Feeble-minded, Colchester) writes: In your report on the Committee Stage of this bill you state that Clause 3 was amended so that a certificate from a judicial authority would be necessary before patients could be sent to institutions under this clause. Your correspondent has, inadvertently no doubt, made a mistake on this point, as no certificate by a judicial authority is necessary. This clause only applies to those patients sent to institutions "at the instance of a parent or guardian"—that is, voluntarily. It is unfortunate that the Committee has, as you state, insisted on two medical certificates for this class of patient. This will inflict a quite unnecessary expense on the poorer classes who wish to put their defective relatives in institutions, while richer people, who have the strongest objection to advertising the fact that they have any one defective belonging to them, will simply refuse to have such defective seen by a doctor approved for the purpose by the local authority, and will therefore place the defective in an approved home instead of an institution. Our experience here before the passage of the Idiots Act, which was partly passed to do away with two certificates, is sufficient proof of this.